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HOSPITAL PROSPECTIVE RATE SETTING

Issues and Options

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RATE SETTING

Issues
and Options

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PREFACE

This paper was written primarily for those individuals who are interested in setting the rate of hospital payments prospectively. It is not intended to be a "cookbook" that instructs readers in the best possible methods, nor is it an evaluation or endorsement of any prospective rate-setting plan or any aspects of rate-setting systems. There has been little, if any, systematic evaluation of prospective rate-setting programs. Six evaluative studies are currently under way in Upstate and Downstate New York, Indiana, Rhode Island, New Jersey, and Western Pennsylvania. These studies should supply some answers to a number of questions related to the impact of prospective rate determination on hospital performance and on its effectiveness as a cost-containment measure. Until the results of these studies are available (expected by Spring, 1976), very little can be said about specific approaches

to prospective rate setting, other than pointing out alternative rate-setting methods and identifying significant issues.

This paper is divided into six chapters, which fall into two logical groupings: Chapters One through Five deal with the issues that should be considered when prospective rate-setting plans are designed and the options that are available to designers. Chapter Six is a collection of summary descriptions of six operating prospective rate-setting programs and also contains a brief comment on hospital rates in the setting of health maintenance organizations.

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CONTENTS

iii PREFACE

1	CHAPTER ONE:	<u>Background</u>
3		The Rationale behind the Support for Prospective Rate Setting
4		Options
7	CHAPTER TWO:	<u>Risk and Financial Incentives</u>
9		Risk Sharing
11		The Financial Effect
17	CHAPTER THREE:	<u>Rate-Setting Agencies</u>
18		Sponsorship and Operational Authority
20		Cost and Operations Information
27	CHAPTER FOUR:	<u>Setting the Rate</u>
28		Alternative Approaches to Setting Prospective Rates
32		Identifying Hospital Costs
34		Techniques and Guidelines for Establishing Rates and Rate Increase
37		A Note about Reviewing in the Light of Regional Planning

39	CHAPTER FIVE:	<u>Units of Payment</u>
39		Types of Units
41		The Effects of Units of Payment
45	CHAPTER SIX:	<u>Plan Descriptions</u>
46		Budget Review Approaches
60		Formula Approaches
69		Case or Stay and HMO Capitation
75	REFERENCES	

CHAPTER ONE: Background

The theory behind prospective rate setting is simple: If hospital managers are motivated by financial considerations, then financial incentives will influence their decisions concerning hospital operations. The incentive structure of prospective rate setting plans can vary considerably; the incidence of risk can fall solely on the hospital, as in New York, or it can be shared by the third-party payers and the hospital, as in Western Pennsylvania.

Prospective rate setting is but one of the many possible variations of what is generically known as the financial-incentive strategy for containing hospital costs. This incentive strategy has taken numerous forms; and many terms, such as "incentive reimbursement," "incentive payment," "prospective reimbursement," "prospective payment," and "reimbursement incentives," have been

2 Background

used to represent two individual approaches and the strategy in general. These terms have been used interchangeably over the years, and the literature makes little attempt to establish clear distinctions among these various terms or the approaches they represent. This taxonomic problem is further confused by the language of Public Law 92-603, which provides for the use of prospective reimbursement, prospective payment systems, and prospective rates of payment as means of containing the costs of hospital care. The Law fails to define these terms and, apparently, uses them interchangeably.*

The terms, however, are not used interchangeably in this paper. In the discussion that follows, the terms "prospective rate setting" or "prospective rate determination" are defined as:

...the financial remuneration of health care providers whereby the amount or rate to be paid is established prior to the period over which the rate is to be applied. These rates may be established by formula, through negotiation, by review and approval of a proposed budget, [by a] combination of these, or by other methods. This means that whatever the actual costs incurred by a provider may be, they are paid according to the previously established rates [SSA, 1974, page 1].

The distinguishing characteristics of prospective rate setting implicit in this definition are (1) a heavy emphasis on negative incentives[†] and (2) the establishment of rates before the period during which they will be applied. Prospective rate setting would

* The Senate Finance Committee, however, did define prospective reimbursement during the Committee hearings [Social Security Amendments of 1972, Report of the Committee on Finance, United States Senate, page 224]. The definition used is the same one quoted on this page, from the Social Security Administration report to Congress cited in the References at the end of this paper.

[†] A positive financial incentive may be offered in conjunction with the negative incentive.

3 Rationale

place hospitals at financial risk and should, according to theory, encourage hospitals to:

- (1) keep actual expenditures below the prospectively set rates;
- (2) put increased emphasis on the identification and surveillance of the costs associated with the mix and output of various services provided; and
- (3) examine the financial implications of new facilities and services [Dowling, 1974, page 164].

It should be noted that the definition of prospective rate setting used by SSA is precise. Not all of the currently operating prospective reimbursement programs fit this definition.* Sweeping and loosely defined provisions for reactive rate adjustments, for example, would cause a plan to fall outside of the bounds of the SSA definition.

THE RATIONALE BEHIND THE SUPPORT FOR PROSPECTIVE RATE SETTING

An intense interest in hospital prospective rate setting has developed among various interest groups because reimbursement for costs or charges, which are the generally accepted means by which third parties pay hospitals, are implicitly inflationary and provide little inducement for hospitals to control expenditures.

The call for the implementation of prospectively determined rates has come from the national and state legislatures, from state insurance commissioners and other public officials, from business leaders, from Blue Cross plans, Federal Medicare and State Medicaid plans and other third-party payers, and from the American Hospital Association, state hospital associations, and hospital managers. Each group is concerned with the absolute and relative cost of health care and health insurance. In addition, it is believed

* See Chapter Six of this paper for brief descriptions of six currently operating financial-incentive plans.

that prospective rate setting will enable Medicare and Medicaid to project their annual outlays more accurately, and will make hospitals more aware of costs and of budgeting techniques that might control expenditures.

Congress has instructed the Secretary of Health, Education, and Welfare to:

... directly or through contracts with, or grants to, public or private agencies or organizations, ... develop and carry out experiments and demonstration projects designed to determine the relative advantages and disadvantages of various alternative methods of making payment on a prospective basis to hospitals, skilled nursing facilities, and other providers of services for care and services ... in order to stimulate such providers through positive (or negative) financial incentives to use their facilities and personnel more efficiently and thereby to reduce the total costs of the health programs involved without adversely affecting the quality of services by containing or lowering the rate of increase in provider costs that has been and is being experienced under the existing system of retroactive cost reimbursement [P.L. 92-603, Sec. 222 (a) (1)].

SSA has sponsored a number of prospective payment experiments over the last few years and is continuing to support new and diverse programs; SSA is also initiating a program to develop one or more model prospective rate-setting systems. The significance of all SSA efforts has increased as a result of the introduction of National Health Insurance (NHI) legislation. The majority of the NHI bills introduced in the 93rd Congress contained prospective rate-setting provisions, and a bill relating to medicare payments introduced during the same legislative session had a similar provision. Although none of the bills were passed, it is now probable that some form of prospective rate setting by some third-party payers will be put into national use in the future.

OPTIONS Numerous options are available for each of the aspects of a prospective rate-setting system, and all of the options can be combined in numerous ways. The options for the major aspects of a

5 Options

system, listed below, are discussed in Chapters Two through Five:

- (1) the level of risk and the incentive structure;
- (2) the administrative superstructure necessary to establish and oversee the setting of rates;
- (3) the method of establishing the rate, which subsumes:
 - (a) the choice of a basic approach or method,
 - (b) the components of hospital costs and operations upon which to focus the rate-setting apparatus,
 - (c) the techniques and guidelines for establishing the rate or allowable rate increase; and
- (4) the unit of payment.

Just how effective prospective rate determination will be is still a topic for much research; the idea has great appeal and much currency, but there has been little systematic analysis of the effect of financial incentive plans on hospital expenditures.

The Social Security Administration is directing research into this area, and has already accumulated some evidence that prospective payment "brings increased predictability of costs and revenue for third-party payers and for the provider " [SSA; page 4]. Admittedly the evidence is inconclusive, but SSA has made some preliminary observations that financial incentive and prospective rate-setting mechanisms can be effective on both the macro and the micro levels of health care delivery. Prospective rate determination provides health care planners with another tool for putting regional plans into effect. Equally as important, however, is the possibility that prospective rate-setting plans will stimulate improved internal financial planning and management by individual hospitals.* As the SSA staff report on prospective

* See pages 20-26 for a discussion of financial planning techniques.

payment states in its observations on existing systems:

The development of better cost utilization information is a prerequisite to the equitable determination of hospital rates. It offers side benefits of great potential value both to hospital managers concerned with improving internal controls and to agencies concerned with bringing a greater degree of rationality to the health care system

The process of establishing rates prospectively requires both hospital administrators and rate setters to more critically examine the specific elements that make up hospital costs. Improved budgeting and program planning become necessary and new expenditures are apt to be made on a better informed basis than under a retrospective reimbursement system [SSA, page 4].

Although this paper tries to address topics of interest and importance related to prospective rate setting, it is far from a definitive work. Prospective rate setting is a new topic, and research is sparse. This paper makes no conscious attempt to recommend any action, nor is it in any way a declaration of SSA policy concerning the issues raised. It is intended only to bring the issues and options into sharper focus, to clarify the debate about them, to encourage experimentation, and to foster expanded research into the prospective setting of hospital rates and its effect on the economics of health care.

CHAPTER TWO: Risk and Financial Incentives

The basic theory behind much of the planning and regulation of the health care industry is that costs can be reduced by stimulating the industry to operate more efficiently and effectively. As Paul Feldstein [1968] has discussed in an analysis of reimbursement plans, there are two general approaches to this overriding goal: The first approach is to reduce aggregate cost by stimulating individual institutions to make internal operations more efficient -- reducing prices without adversely affecting quality. The second approach is to reduce aggregate cost by altering aggregate patterns of utilization and growth across institutional providers so that all are forced to make themselves more efficient in relation to regional needs and resources -- "reforming" the market that determines prices as well as reducing costs and sustaining quality. It is obvious that these two approaches are entirely distinct; what may not be obvious is that they are, or can be made, entirely compatible and mutually reinforcing.

Strategies that follow either or both of these approaches may depend on incentives, whether positive or negative, to effect the appropriate alterations in institutional behavior. Viewed as a single plan, prospective rate setting provides

incentives for individual institutions to change their internal patterns; any effects it might have on the aggregate pattern would seem to be secondary to its focus. Many proponents of prospective rate setting, however, suggest strongly that it should always be considered as a part of a more comprehensive approach to health planning. The SSA staff report to the Congress on prospective payment suggests, among other considerations, that prospective rate-setting systems should be designed to complement general policies regarding "... new facilities and services, the phaseout of underutilized services, and the establishment of national, state, and local priorities" [SSA, page 6]. This is necessary not only to avoid conflicts between prospective rate-setting and other regulatory and planning activities, but also to emphasize the common goal of both the aggregate and the individual approaches to improving the efficiency of the health-care industry. The SSA staff report suggests, in particular, that:

Tying prospective payment for depreciation, interest, and new operating costs associated with expansion to the planning process may effectively place a rational control on expenditures for facility construction, new equipment, and expanded services. Similarly, the phaseout of underutilized services and beds could be encouraged by reimbursing on the basis of acceptable utilization levels.

Prospective payment systems should encourage optimum utilization of available health services through preadmission diagnostic testing and proper, timely discharge procedures. Ambulatory care should be encouraged whenever appropriate [SSA, page 6].

The coordination of prospective rate setting with regional planning allows health planners to integrate macro and micro output incentives, and thus to use rewards and penalties to induce an acceptable quality of care at minimal cost. All individual hospitals will have incentives to increase the efficiency of their operations, viewed in isolation or in relation to regional patterns of care.*

*Whenever we refer to efficiency in this paper, we intend it to be understood in the context of this paragraph, in which "efficiency" connotes both efficiency and effectiveness. While the thrust of this chapter is toward improving the operating efficiency and effective utilization of providers, the role of prospective rate setting as an anti-inflation tool should not be overlooked.

RISK SHARING In theory, the incentive structure of prospective rate determination will influence the way in which hospital services are delivered. The basis for this theory is the assumption that financial pressures and objectives heavily influence hospitals. Prospective rate setting acts on this assumption by forcing hospitals to bear a greater degree of financial risk*; under such a system hospitals themselves, rather than payers, would bear all or part of the cost of overspending the set rate.

The incidence of risk can fall solely upon the hospital or be shared by the hospitals and the payers. An adjustment could be made to the hospital's prospective rate by revising it during the fiscal period, subsequently changing the rate of payment. Hospitals that have cost overruns caused by circumstances beyond their control may have rates prospectively increased to compensate for future effects of those circumstances.† In some plans, payers may also absorb a predetermined percentage of cost overrun, regardless of its cause, if the system makes no provisions for prospective rate adjustments. Institutions that experience cost overruns that are due to poor management, however, cannot receive rate adjustments. This, of course, assumes that prospective rate-setting systems can effectively evaluate management performance.

* In the context of prospective rate setting, "risk" can be thought of as: (1) the uncertainty associated with the assumptions underlying cost projections (price increases, occupancy levels, patient mix, and so on) that are outside the control of the hospital; and (2) the uncertainty associated with management's ability to operate within the budget (controllable in proportion to the accuracy of expense projections, assuming competent management).

† The payment rates could be reduced if circumstances favor the hospital -- for example, if anticipated wage increases are less than expected or occupancy is greater than projected. Payments might be increased if the hospital can show that input costs are greater than projected -- for example, if fuel or labor costs increase beyond expectations.

Negative
and Positive
Incentives

A prospective rate-setting system utilizes negative incentives to make inefficiency a direct expense of the institution, and it can also use positive incentives to make efficiency a source of extra capital. However, there are many unanswered questions about the use of incentives to encourage hospital administrators and staff to improve operating efficiency.

Two highly significant questions complicating the issue of prospective rate setting are: (1) the question of its effect on quality of care, and (2) the possibility that institutions might avoid over-spending the prospective rate without improving their efficiency. If financial penalties (i.e., losses) due to cost overruns force hospital administrators to curtail necessary services, to eliminate necessary elements of the hospital staff, or exclude potential patients who have nowhere else to go for medical care, then the effects of those penalties are counter-productive. However, according to the SSA report to Congress, at present financial penalties do "... appear to have been a successful overall negative incentive to cost overruns" [SSA, page 7]. Current research may reveal the extent to which this apparent success was achieved by shifts in case mix, changes in quality, or increases in utilization.

Prospective rate-setting systems can provide positive incentives that allow hospitals to retain all or a portion of the excess of revenues over expenses. What the hospital retains would, of course, depend on the relative weighting of positive and negative incentives. As the SSA report on prepayment makes clear, however, "Many of the initial assumptions that economists made regarding the power of positive financial rewards to affect organization behavior have not been adequately tested in the complex hospital environment" [SSA, page 7]. Positive incentives may not produce cost savings at all, for example: "... many prospective payment systems base future rates on present or past cost experience ... In the long run, such prospective systems may encourage providers to keep the spending base as high as the prospective rate permits" [SSA, page 7].

11 Risk Sharing: Including Physicians

Including Physicians in the Incentive System

Special attention will have to be given in any prospective rate setting system to the inclusion of physicians who have administrative or quasi-administrative authority. Without such provisions, a prospectively determined rate would have little influence on such factors as the admission and discharge of patients, the volume and timing of medical procedures, the purchase of specialized equipment, and perhaps even basic decisions regarding the scope of the institution's operations and the size of its facilities. Such provisions, however, will not be easily made. This is particularly true if the objective is to subject physicians to some degree of financial risk.

THE FINANCIAL EFFECT

Although prospective rate determination uses financial risk and possible return as motivating forces, it is not intended to jeopardize the financial condition of the national system of community hospitals. To the contrary, it is intended primarily to provide financial incentives to initiate or alter certain aspects of hospital performance. In the short run, a substantial number of institutions may experience financial difficulties at the onset of a mandatory prospective rate-setting system in which rates are tightly set. This is to be expected, however, because it takes time to adjust to a new relative weighting of various institutional objectives and to develop the managerial skill necessary to deal with a new incentive structure.

Prospective rate-setting agencies will naturally strive to curtail rising costs, but they must also consider the problem of producing real savings (maintaining quality and providing a sufficient quantity of services) over a continued period of time. There is a danger that some may assume that cost containment could be accomplished solely by tightening hospital rates, and thus increasing financial pressures. But despite the relatively encouraging evidence so far, tightening rates may not, by itself, reduce real hospital costs. Hospital managers may respond

erratically and inappropriately to the financial pressures such actions would place on them and the long-term effect may actually increase the real cost of care.*

Although there is no satisfactory behavioral model of hospitals, a composite model would suggest that administrators and trustees strive for financial solvency, the best quality of service, institutional harmony, and institutional growth [Schulz, 1973]. A well-designed prospective rate-setting system should heighten the concern for financial solvency in all institutions and make it a critical concern in many others. Heightened concern for financial solvency will not, however, preclude the attainment of the remaining three objectives -- quality, harmony, and growth. These three objectives will remain within reach for the community hospital system as a whole. Even if tight rates are universally applied, efficient institutions will always strive to achieve quality, harmony, and growth.

Characteristics
of the Rate-Setting
System

The effect of prospectively set rates on the financial condition of hospitals is dependent upon the characteristics of the rate-setting system and on the ability of hospital managers to respond to the pressures and incentives inherent in the system. The elements of the system can be summed up in five general points:

- (1) whether there is voluntary or mandatory participation by hospitals;
- (2) the restrictiveness or "tightness" of the prospective rate;
- (3) the degree of equity with which rates are applied;
- (4) the degree of risk, and
- (5) the categories and level of detail of cost information about elements of institutional operations on which the prospective rate-setting system focuses.

* See the discussion in Chapter Three about financial management techniques (pages 20-26).

Mandatory or
voluntary
participation

The provision for the mandatory or voluntary participation by hospitals will significantly influence the effect of prospective rate determination on hospital finances. A voluntary plan would cause no adverse effects; only those hospitals that believed they could cope with the system would volunteer, and of these only those hospitals that did cope with the system would remain. Such a plan would have virtually no effect on the institutions whose inefficiencies it was intended to penalize. It could almost be said that the number of hospitals participating in a volunteer prospective rate-setting plan could, under certain conditions, be a rough index of that plan's effectiveness. If the assumption that hospitals attempt to minimize deficits is valid, then hospitals would, other things being equal, refuse to participate in any voluntary program with a high risk factor or one that offered no possibility of financial gain. Thus, only mandatory plans would be able to have any effect on the financial standing of hospitals, and this effect seems to have the greatest potential as a means of containing costs. The effect of actual plans will depend on the other characteristics of the system: The tightness and equity of the rate, the incidence of risk, and the focus of the plan.

The tightness
of the rate

A tight rate is one that is fair, but that requires the hospital to exercise a good deal of managerial skill and operating efficiency to avoid overspending it. A system that establishes a tight rate is likely to exert a significant degree of financial pressure, particularly at its onset, while hospitals are learning to adjust cash inflows and outflows. None the less, a tight rate will encourage management to react more quickly than a loose rate; and the better the reaction, the better each hospital will fare. Institutions that do not adjust will suffer the most severe financial hardships.

The implications of tight rates are clear: Either a number of inefficiently run hospitals will be forced to close, which will reduce the supply of beds, or some inefficiently run hospitals will have to be given special financial assistance to avoid closing. Any prospective rate-setting plan that sets tight rates will be faced with this eventuality.*

The "equity"
of the system

The equitable determination of rates is an important and complex characteristic of any system that sets rates prospectively. "Equity" refers to a broad range of issues that relate to management's ability to attain or retain financial stability by improving the operating efficiency of the hospital in response to prospectively set rates. If one or more hospitals are not able to attain financial stability by reaching a level of operating efficiency considered satisfactory by the rate-setters, then the system contains inequities. One instance of the many equity issues facing the designers of prospective rate-setting systems that rely on hospital-group comparisons is the appropriate specification of those groups. If hospitals are inappropriately grouped, some will unduly prosper and others will encounter undue financial pressures. Because inequities can simultaneously favor some and harm other hospitals, the net effect of inequities on a system cannot be determined except by experience; the actual effect will be dependent upon the nature, size, and number of specific inequities.

The degree
of risk

As discussed earlier, in any given prospective rate-setting system the number of hospitals experiencing financial pressures and the severity of those pressures will be directly related to the degree of risk being borne by hospitals. There is an obvious trade-

* It might be noted, however, that a system that simultaneously proposes penalties for inefficiency and makes allowances for it would be self-contradictory.

off between risk and incentive: The degree of risk borne by hospitals provides a clear incentive to cut costs in the short run; but a system that increases risk without providing the possibility of financial return will effectively retard the growth of efficient providers or force them to depend on debt or government financing. Both possibilities would increase the cost of care in the long run.

Cost
information

The "focus" of any plan, the degree of detail with which it scrutinizes hospital operations and costs, is an important determinant of the financial effect of prospectively set rates upon hospitals. The more detailed the scrutiny of the rate-setting system, the greater the potential impact. A system that emphasizes detailed review of all hospital operations and prescribes cost limits for the various and sundry items on the operating statement will affect the hospital far more than a system based upon total budget, even if the final rates set by both systems were identical. A narrower focus allows less managerial flexibility and increases the probability that an institution will overspend its final rate. Actual experience with prospective rate setting, however, has resulted in just the opposite. Line-by-line reviews afford hospital administrators many more negotiating points, and this situation typically produces looser rates than techniques that allow fewer negotiating opportunities.

CHAPTER THREE: Rate-Setting Agencies

The primary goal of a rate-setting agency is to see to it that provider costs are contained in the long run without lowering the quality of health care or the availability of necessary services - - in other words, to produce real savings.* An equally important function, however, is to ensure that rate-setting systems are equitable, for inequities in the system can actually result in higher costs over time.

Depending on its chartered purposes, the activities of such an agency can involve much more than establishing and reviewing rates or recognizing agreements between parties. The job may also include collecting, maintaining, and analyzing payment records, disseminating information, hearing and resolving contested rate-making decisions, regulating Blue Cross plans, reviewing institutional budgets, and enforcing uniform accounting and fiscal control procedures.

* Implicit in the discussion of rate-setting agencies is the requirement that their efforts are cost-effective and that their concern with the public interest is paramount.

SPONSORSHIP AND
OPERATIONAL AUTHORITY

Prospective rate-setting systems can be sponsored by third-party payers, governmental bodies or agencies and state hospital associations. All such systems may be placed in one of three categories:

- (1) systems that have direct state control of hospitals similar to the regulation of public utilities;
- (2) systems that are subject to indirect public monitoring; or
- (3) voluntary and frequently experimental rate-control programs.

States can directly control prospective rate determination by statute. Responsibility for rate control can be placed in independent state rate commissions established expressly for that purpose or in agencies that regulate the purchase of hospital services, such as state medicaid programs.

Indirect public control can be exercised by various state commissions -- for example, state insurance commissioners, who have the authority to approve or set the rate of hospital payment made by state Blue Cross plans. The state commissioner (insurance commissioner or otherwise) can either directly control the prospective rate or can simply require that rates be prospectively set.

Voluntary prospective rate setting can be carried out by third-party payers in conjunction with individual hospitals or under the auspices of state hospital associations. Blue Cross plans and other third-party payers can include a prospective rate provision in its standard contract as an optional mode of payment. State hospital associations might actually administer the rate-setting system and suggest the rate of payment for each and every hospital in the state, but final rate approval under such a system would rest with the hospitals and the third-party payers. If a satisfactory rate could not be agreed on, one or the other would not be party to a contract.

Administration In addition to the various possible auspices under which they might operate, prospective rate-setting plans can differ significantly in the way in which they are administered. The various missions of provider organizations, fiscal intermediaries, planners, advisory bodies and state agency administrators present a wide variety of options from which to choose. In spite of this plethora of administrative and structural possibilities, there are two basic approaches to the operation of rate-setting programs:

- (1) it can be a regular administrative function of third-party payers;
- (2) it can be a traditional regulatory activity that includes procedural guarantees of objectivity and due process.

Either approach can utilize varying combinations of consumer, expert, and professional personnel to oversee the system or set rates. Additionally, rate-setting organizations can be assisted by advisory bodies to overcome limitations in information or expertise. Sponsorship of advisory groups can come from hospitals and hospital associations, which results in a form of peer review, to state governments, which can rely on independent experts and consumers for their reviewing bodies.

Rate-review activities can be carried out by a staff that collects and reviews hospital data, prepares guidelines by which the data are evaluated, and recommends a final rate to either an individual, a commission, or a board that sets the final rate. Specific examples of staff activity can be found in the descriptions of the Western and Northeastern Pennsylvania, New York, and Rhode Island plans and Commission or board approach in the Indiana plan in Chapter Six. Generalizations about the role of staffs and

commissions or boards in the rate-setting process are difficult because of the great diversity in the organizational formats possible under each approach.

Appeals Another feature of the rate-setting process can be a mechanism for hearing appeals. Prospective programs can allow providers one or more appeals following the initial rate determinations. Appeal procedures can include review by the board or commission that originally established the rate, mediation by a special board, and review on behalf of either the provider or consumer by an independent outside group. The courts can also be the designated agencies for first- or second-stage appeal bodies.

COST AND OPERATIONS INFORMATION

Due to the diversity of accounting techniques, cost-allocation methods, and management systems in use, prospective rate-setting plans will have to establish uniform data and information systems. The kind of system used will depend on the level of detail to be reviewed. The SSA report on prospective rate setting makes a partial list of the kinds of reports that might be required:

In addition to reporting revenues, costs, and statistics, prospective systems may also employ supplementary reporting systems. Again, the design and objectives of the prospective system dictate the types of reports required. These may include:

- (1) special reports on new services, facilities, and programs;
- (2) reporting the productivity within the hospital by use of such sources as Hospital Administrative Services (HAS) productivity indicators;
- (3) reporting the level and quality of care (because of the lack of universally accepted quality care indicators, these systems are still in the design and evaluation phase) [SSA, page 14].

All cost information gathered through these reports will, of course, be valuable beyond the immediate needs of the rate-setting system. The information, therefore, should be organized to serve the needs of health planning agencies outside

the prospective rate-setting program, as well as of rate setters and hospital managers. There are limitations to the benefits derived through the use of analytical techniques, chiefly stemming from the form, reliability and availability of data and the reliance on past performance; but these limitations can be offset by the potential value of the analysis to all parties.

This value can be discerned by the hospitals as well as by prospective rate setters and health planners. By requiring the appropriate information about a hospital's past performance and questioning the assumptions utilized in projections of future operations, rate setters can, if they desire, appraise management performance, hospital efficiency, financial strengths and weaknesses, credit-worthiness, and other aspects of the hospital that might influence the determination of a prospective rate. At the same time, hospital financial managers can only benefit from preparing schedules and budgets, which will give them greater insight into the operating characteristics of their institutions. For example, if the payment unit is the total hospital budget paid in twelve equal monthly installments, the hospital must first make accurate projections of patient mix, determine the cost structure of the institution and ascertain the breakeven occupancy level. An estimate of funds requirements, based upon patient mix and volume projections, can be undertaken next. These estimates typically take the form of ratio analysis and pro forma budgeting. Cash budgeting is extremely useful in planning cash outflows to coincide with the regular inflow of cash and for determining the patterns of funds requirements, both seasonal and cyclical. This has implications for inventory control, trade credit strategy, and liquid-asset management. Questions of fund raising and financial planning (the addition of new equipment and the lease-or-buy decision, for instance) are dependent upon the availability of funds

brought about by the generation of surpluses, borrowing, or philanthropic donations. As a result of performing this analysis, a number of questions should be raised relating to the hospital's financial ability to deliver all of the projected services in the manner it intended. By acting on these questions, management should be able to make decisions that will alter the hospital's performance and bring costs and revenues into line.

Flow-of-Funds
Statements

An analysis of the flow of funds for a given period will show how funds were utilized and how the funds were obtained. By classifying the uses and sources of funds, the rate setters and planners can determine whether decisions were "normal" in comparison with the hospital's own experience and projections and with the performance of other hospitals.

Taken in its most general context, the analysis of the flow of funds can be considered as an analysis of economic values or investments and claims; it is, therefore, an analysis of the variations in the magnitude of the various accounts or items on the hospital's consolidated balance sheet over a specified period of time. The difference in the magnitude of individual accounts in the beginning and ending balance sheets represents the fluctuating flow of net funds during the period. This flow results from the decisions made by management during the period. This type of analysis can help answer questions about the hospital's major uses and sources of funds, whether or not the sources or uses of funds are dangerously out of proportion, and whether or not the long-term uses of funds are appropriately offset by the long-term sources of funds [Helfert, 1967, pages 3-8].

Cost Structure and
Breakeven Data

A critical factor in the rate setters' ability to determine equitable prospective rates is their understanding of the cost structure of the institutions for which rates are set. Knowledge of the relationship between revenues, the cost of patient care and administrative expenses at varying levels of output cannot be overemphasized. Costs are normally classified as either fixed or variable: Fixed costs remain constant over a given range of operations or volume, and variable costs demonstrate a proportional relationship to modulations in operating volume over a given range. For extremely short periods of time, it is possible for all costs to be fixed; and over long periods of time all costs are variable.

Breakeven
analysis

With an understanding of the cost structure of the hospital, it is possible to compute the unit-volume breakeven point for a current period and make reasonable cost projections on which breakeven volume can be estimated for future periods.* Knowledge of the necessary breakeven volume will allow the rate setters to predict the effect of fluctuations in volume upon operating surpluses and losses. Whether the projected volume is below the breakeven point or not sufficiently above it, hospital management can take steps to alter the cost structure of the institution by reducing those fixed costs that reduce the hospital's operating leverage, or by reducing those variable costs that will raise the contribution margin of each unit. Both courses of action have the effect of lowering the breakeven volume.

* This might be of particular significance to regional health planners.

Under prospective rate determination, cost structure and breakeven analysis are particularly important. Should unit activity be less than or variable costs more than anticipated, an affected hospital might have little or no ability to raise prices to compensate for the deficit. However, if actual volume levels are monitored regularly and new projections made, hospital management can take actions to change total costs or alter future rates. This procedure can help prevent the institution from experiencing large operating deficits.

Ratios* Financial ratios are comparative indicators that are useful for appraising the financial condition and efficiency of hospitals. Ratios have been developed to relate various items on the balance sheet and on operating statements to the results of hospital operations. Ratios, or indices obtained by relating financial data to each other, present information in a more useful fashion than do raw figures. As Erich Helfert advises, however:

Ratio analysis of financial statements must be preceded by careful thought as to the kinds of insights the analyst wishes to obtain. Ratios are not ends in themselves, rather on a selection basis they may help answer significant questions [Helfert, 1967, page 56].

Ratios can be useful in recognizing trends in performance, or in spotting large variances from average or accepted standards. The "analysis" of ratios is really the interpretation of their relative significance; there are few absolutes associated with the technique. Such an analysis is obviously limited by the interpretive ability of the analyst and the reliability, comparability, and comprehensiveness of the hospital balance sheets and income statements used as sources of data.

* See also the discussion of rate-setting techniques in Chapter Four, especially the discussions of formulas (page 31, and of parametric guidelines (page 36).

Financial ratios fall into five classes:

- (1) liquidity ratios, which reflect the institution's ability to meet its short-term obligations;
- (2) debt ratios, which reflect the institution's ability to meet its long-term debt obligations;
- (3) composition ratios, which reflect the relative composition of total assets;
- (4) activity or "turnover" ratios, which reflect the utilization of assets in the operation of the hospital; and
- (5) profitability ratios, which reflect profitability.

In addition to being useful in analyzing current operations and past performance, ratios can be useful in forecasting future financial needs. Some ratios of institutions and business enterprises may exhibit remarkable stability over time; other ratios may vary directly with operating volume. The relative variability or stability of the ratios themselves can be utilized to project a future balance sheet (all projections, of course, begin with an estimate of revenues and volume for the period). Once the balance sheet is projected, the flow of funds can be analyzed to aid management in determining the need for funds to sustain a planned volume of activity.

Basic Financial
Forecasting
Statements

Financial forecasting is the unification of past experience, financial ratios, funds flows, projected economic conditions, policy decisions, and future activities into a series of schedules, budgets, and financial statements for the coming period. Because forecasting forces managers to think about the future in a systematic way, it should prevent most unpleasant surprises and emergency decisions. In addition to these benefits, financial forecasting can provide the basis for the standards by which the decisions of hospital managers and the financial effects of new or changing policies will be evaluated.

There are many techniques basic to financial forecasting, but only pro forma operating statements and balance statements are discussed here.*

The hypothetical or anticipatory balance sheet and income statement are among the most common and elementary forms of financial forecasting. They vary widely in form and format: They can be derived from reliable and precise information about the future, or they can be based on intuition and assumption. Past financial ratios can be assumed to persist into the future, or new estimates can be made by statistical techniques to form the basis for detailed pro forma statements.

Pro forma
operating statement

The pro forma income or operating statement is based upon an estimate of future activity.† Once the level of activity is "known," the costs associated with providing various services associated with the given volume level can be estimated. Estimates of fixed costs are allocated to appropriate departments, and departmental variables are costs aggregated. The costs associated with operating at different activity levels can be laid out in various degrees of detail.

Although the pro forma operating statement is based on a substantial number of assumptions and expectations, it can produce a reasonable estimate of anticipated revenues, costs, expenses, and surplus.

Pro forma
balance sheet

The pro forma balance sheet is the best indicator of the future financial condition of the hospital and should be of interest to all rate setters. It is based on the data contained in the pro forma operating statement and other supporting schedules and budgets. Essentially, it presents a forecast of the expected flow of funds in general and of each account of the balance sheet in particular. [Helfert, 1967, page 87].

* Econometric techniques and simulation modeling are beyond the scope of this monograph.

† The estimate can range from a rule-of-thumb to one determined by an econometric model.

CHAPTER FOUR: Setting the Rate

Prospective rate determination is, by definition, a form of rate setting in which timing is the essential factor.

A prospective rate can be based on various criteria and paid in any one of a number of possible units (per diem, capitation, by admission, and so on), but it must be established in advance of the period of actual payment. Nonetheless, as the SSA staff report notes,

... one of the universal problems of the prospective rate setting systems reviewed has been the inability of the rate setting agency to establish the prospective rate on a timely basis. In many cases, new rates were not established until several months after the beginning of the prospective period [SSA, page 16].

In most of these cases, the rate-setting agencies set interim rates that are adjusted and reconciled to the final rate when

it has been set. The purpose of prospective rate setting, however, is to provide incentives for cost reduction by stating what unit or total revenue will be prior to the actual expenditure of funds. If rates are not set in advance, hospital management cannot be expected to adequately respond to the incentives inherent in prospectively determined rates.

ALTERNATIVE
APPROACHES TO
SETTING PROSPECTIVE
RATES

The various methods for establishing rates of payment essentially fall into one or more of four categories: bidding, negotiation, budget review, and formula.* These categories may appear to be distinct, but in actuality they exist on a linear continuum, and practical applications of them will probably incorporate aspects of two or more. Nevertheless, it is convenient to consider each method as though it were distinct.

Bidding

Although a prospective rate-setting system based upon bidding has never been implemented on a community-wide basis, it is possible to outline a model of a bidding system. Third-party payers would solicit bids from hospitals prior to the start of a fiscal period in order to establish a rate of hospital payment for the upcoming period. The third-party payers can choose the hospital with the lowest bid in a given region to provide care for its subscribers in that region or establish a rate for all hospitals based upon the bids tendered.

The most glaring difficulty with bidding is that there is only one method by which the rate setter can ensure that the final rate will be sufficiently low: Set the maximum allowable bid prior to the bidding process. Another difficulty is that bidding works best when there is real competition and when the buyer deals only with

* See Chapter Six for brief reviews of six actual rate-setting plans of the budget-review and formula types.

the lowest bidder; it can work well for "small" buyers of hospital care, but it is impractical for larger buyers. A small buyer may only require the services of one hospital in a region, but a larger buyer might require the resources of many or all hospitals in a region.

If no maximum is set and a hospital is the only one in the area, its bid, whatever it might be, would become the rate under a bidding approach. Even if a rate is set from multiple bids:

- (1) There is no assurance that there will be a meaningful difference among bids, because hospitals may not be willing to compete over price.
- (2) If there is a spread among the bids, the low bid can still be high enough to support a good deal of "fat" in hospital operations.

Of course, hospitals might be willing to compete on the basis of price and the low bid might be tight enough to promote efficiency.

To prevent the difficulties discussed above, the system would have to take on the characteristics of one of the more elaborate approaches that follow. The bidding method was originally suggested because of its apparent ease of administration, but its ease might prove illusory.

Negotiation

The starting point for any negotiation will virtually always be a bid, a budget review, or a formula-derived rate. Negotiation stresses the one-to-one relationship between the hospital and rate setter, and allows the hospital to play a major role in the determination of the prospective rate. Therefore, bargaining power can be an important factor in the setting of a high or low rate. In an area where there is only one hospital, there is little or no

chance for comparison; this puts the rate setter at a disadvantage. Conversely, in an area with many hospitals, the rate setter has the advantage of being able to compare costs among many institutions.

The strength of the negotiation approach is its ability to deal with individual institutional characteristics and with specific objectives of local planners. Its weaknesses stem from the huge administrative effort required when setting rates for large numbers of hospitals and from the fact that the negotiating ability of the participants can have more influence than strictly objective factors.

Budget Review

Under the budget-review approach, a rate-setting agency evaluates the projected budgets and schedules of individual hospitals and sets the rate according to the guidelines the agency has set. The reviews are normally, but not necessarily, carried out at regular intervals, usually once a year. The budget-review process emphasizes the institution's use of the budget as a means of forecasting, analysis, and control. The regularity and the depth of reviews facilitates the rate reviewer's direct influence and participation in the institutional decision-making process and allows the rate setter to consider individual differences among institutions.

The expertise of reviewers and rate setters is critical to the overall success of the budget-review approach. Detailed analysis requires meticulous preparation of capital and operating budgets and knowledge of their underlying assumptions. In addition, the plausibility of projected volume levels and the appropriate use of manpower and materiel must be accurately determined.

In many instances, the interplay between the individuals representing the hospital and the rate setters can have a considerable impact upon the budget that is finally approved. A prospective rate-setting system that does not utilize a set of rigid guidelines may allow either or both of two problems to interfere with the setting of fair but sufficiently tight rates:

- (1) some hospitals will be better able than others to "justify" their operations and cost characteristics because they

possess the expertise to manipulate the relevant data;
(2) some hospitals will be better able than others to
negotiate the final rate.

Budget review "... allows a hospital to attempt to gain recognition of its financial requirements, as it sees them, and rate setters to attempt to pay less than requested for a hospital's costs, if these seem inappropriately high " [Dowling, 1974, page 174].

Formula Formulas range from those based on cost functions and point systems that differentiate among individual hospitals to those that utilize averages, indices, or projections of established cost trends, which might fail to allow for differences in such things as hospitals' case mix, occupancy, and intensity of care. [Dowling, 1974, page 174]. It is possible to construct formulas that will take individual institutional variation into account by deriving individual formulas for each hospital or by grouping similar hospitals and applying averages and indices to the group. New prospective rates or rate increases are usually computed annually and may be derived by adding standard percentages to the institution's base rate,* or they may be tied to one or more indices that reflect various rates of cost increase in the general economy.

The formula method is the most effective technique for placing strict controls on rate (and, it is hoped, cost) increases [Dowling, 1974, page 175]. Assuming that prospective rates are mandatory, rate increases can be as small as desired by the rate setters. Increases can, therefore, also be made arbitrarily; but, because hospitals could respond by cutting quality under such circumstances, such an arbitrary approach would be counterproductive.

* The base rate or budget can be established by formula or by other means. Examples are the estimation of institutional or group-specific cost functions, the utilization of a simple moving average of prior expenses, or the performance of a full annual budget review.

Combinations
and Variations

Additional methods of prospective rate setting can be created by combining any two of the four rate-setting methods previously described. For instance, the proposed budget can be initially assessed by formula -- perhaps by a predetermined increase of the previous year's expenses -- then the formula-determined budget can be compared with the proposed budget. If the proposed budget total is greater than the formula-determined budget, the proposed budget can undergo a complete manual review. This approach has been known as "review by exception" and can be applied to budget subtotals as well as budget totals.

IDENTIFYING
HOSPITAL COSTS

The four basic prospective rate-setting methods can be applied to any of three aspects of a hospital's proposed operating or capital budget:

- (1) institutional requests for rate changes based upon the addition of new services or facilities;
- (2) institutional requests for changes in a certified or previously approved schedule of unit-service rates;
- (3) total operating budget:
 - (a) the bottom line or the total expense,
 - (b) various departmental totals or budget subtotals, or
 - (c) any and all line items.

Which of these five aspects is chosen as the basis for determining the prospective rate will depend upon the staff and financial resources that are available for the rate-review process and on the objectives of the rate setters. To illustrate, if the main objective of the rate-setting agency is the containment of cost by limiting the addition of new services and facilities, the agency would choose (1) or (2). If rate setters want to have greater control over all aspects of hospital operations and costs, they

* Consider for example the application of a maximum departmental expenditure increase: If the figure in the reviewed budget is above the maximum, it must be reduced to the maximum; if the figure is below the maximum, it is accepted as is.

would choose any of (3). The more detailed the review, however, the greater the cost to the reviewing agency.

It would be helpful to comment on the administrative costs of setting rates by various methods and according to various aspects of hospital budgets, but it is not yet possible to do so with any certainty. As part of a nationwide survey of state health regulations, Lewin and Associates, Inc. [1974], compiled cost and staffing data for agencies that used three methods of setting rates: (a) budget approval, (b) charge-increase review, and (c) formula. The typology used by Lewin and Associates in its survey, however, does not correspond to the one presented in this chapter. In any event, Lewin and Associates concluded it is extremely difficult to generalize about the financial and human resources required for a given rate-setting method. A direct comparison of the figures can be misleading, as few of the existing plans are directly comparable in terms of the number of annual reviews they conduct, the complexity and depth of each review, and the general structure of their administration.

A Note About
Reviewing Labor
Costs

Wages, salaries, and fees are the largest hospital expense categories and, therefore, deserve special attention. Although the information is readily available, such costs are the most difficult to control, since every wage earner not only strongly resists any loss of income, but also strives constantly to increase it. This tendency is reinforced by both the political and the economic environments, reinforcement that gives little indication of diminishing in the future. Regardless of the difficulties involved, however, the problem must be addressed by prospective rate setters.

The fees paid hospital-based physicians are part of the problem of manpower costs that may be out of the reach of any prospective rate-setting plan that does not specifically cover

them. Aside from the problem of making physicians accountable for administrative costs, this issue may be practically approached only by governmental agencies. As the SSA report states:

This sensitive problem appears, for the most part, to be ignored by the third-party payer except for extraordinary situations. An opinion commonly expressed is that only the Federal Government has the leverage available to effectively tackle and resolve the problem of excessive provider-based physician remuneration [SSA, page 14].

TECHNIQUES AND
GUIDELINES FOR
ESTABLISHING RATES
AND RATE INCREASES

When the elements of hospital cost and operation have been chosen, techniques for establishing rates must be developed. The possible techniques -- or guidelines -- for doing this fall into three general classifications:

(1) Comparative Techniques

- (a) intra-institutional cost history and trends, and
- (b) inter-institutional comparisons of historical and current costs;

(2) Parametric Guidelines*

- (a) a specific predetermined ceiling;
- (b) a variable increase that fluctuates with such selected external economic variables as the consumer or wholesale price indices, and such internal variables as case mix, occupancy, and so on;
- (c) a cost function in the form of a predictive equation.

(3) Normative Guidelines

- (a) standards resulting from models based upon a priori assessments of fixed and variable costs, and

* Guidelines 2(a) and 2(b) are currently being utilized in the New York and Western Pennsylvania prospective payment plans. The cost-function approach has never been implemented, but it holds the promise of being the most equitable of the three parameters: for a complete discussion of this approach, see Lave et al. [1973].

- (b) standards developed from on-site studies (e.g., industrial engineering studies) or various statistical estimation techniques that establish the optimal relationship between fixed and variable costs.

Comparative
Techniques

Comparisons of cost or expenses are easily utilized by prospective rate-setting systems. The examination of previous intra-institutional cost experience or of trends in previous intra-institutional cost establishes a base to which either parametric or normative guidelines can be applied. Historical cost examinations are one way of dealing with the idiosyncracies of individual institutions:* Each institution is viewed in terms of its own patient mix, occupancy, and staffing levels; rate increases can thus be judged from the standpoint of their appropriateness to each individual hospital's situation.

Inter-institutional comparison can vary widely in scope and structure. The comparisons may focus upon dollar cost or rates of increase in costs; utilize predetermined cost screens or correlation and regression analysis; scrutinize a select group of operating statistics and financial data (utilization data and departmental budgets); or simply review a number of budgets or cost reports simultaneously. Inter-institutional comparative techniques may be less productive or, for that matter, less equitable than might otherwise be expected, especially if hospitals are compared to inappropriate groups of other hospitals. Current methods of grouping hospitals for comparative purposes are crude and can result in misclassification. Budget-review program and formula systems, however, can use such methods to gauge the appropriate ranges within which cost increases might be allowed. Inter-institutional comparisons of the case mix, or specific diagnosis composition of hospitals'

* This approach differs from 2(c) in that it is more subjective in nature.

patient loads, may prove to be a reliable way to group hospitals. This comparative technique, however, is probably beyond the current capabilities of most existing rate-setting agencies. The lack of uniformity in hospital accounting practices and cost-allocation methods, differences in management organization, and various other practices make a meaningful and direct comparison of departmental and unit costs almost impossible. As noted in the discussion of cost and operations information (pages 20-26), prospective rate-setting programs will probably have to develop uniform accounting and reporting procedures to assure the availability of comparable data from different hospitals.

Even with readily comparable data, however, the use of comparisons does not guarantee that hospitals are operating efficiently. They merely assure the rate setter that the proposed expenditures for any given hospital are not out of line either with its previous expenditures or with the expenditures of similar institutions.

Parametric Guidelines

Parametric guidelines can be used in setting the rate itself, or they can be used to evaluate proposed cost increases. Thus, they can directly determine the payment to individual hospitals, or they can serve as guidelines for those who will ultimately set new rates, based on changing hospital cost experiences. Such guidelines usually rely on ratios or on indices -- for example, the ratio of hospital staff to beds -- and are, by their nature, more highly structured than inter-hospital comparisons. They therefore allow for greater control and predictability. Once established, parameters possess the virtues of simplicity and visibility and give the impression of equal treatment of institutions; but the indices or parameters, as well as the base on which they will be computed, must be chosen with care.

Normative Techniques

Normative techniques base prospective rates on the optimum costs of an efficiently operating institution. Normatively derived guidelines can be applied to both fixed and variable costs.

Unit fixed costs are related to volume or activity levels. For example, it may be determined that institutions should be operating at a certain minimum occupancy level and that the unit rate of payment should be based on that minimum occupancy level. This approach to rate setting effectively establishes the maximum rate of payment for fixed costs. If the hospital experiences higher than the minimum occupancy, its actual fixed costs would be less than the amount of payment.

Variable costs per unit of activity (for example, for labor or drugs) are independent of activity levels or volume over a relevant range of activity. Unit variable costs are directly dependent on a given production technology (for example, capital to labor ratios in the lab) and can, therefore, be analyzed by industrial engineers to determine efficiency norms. Or, as in the case of drugs, payment may be based on an estimate of the cost of generic rather than brand-name drugs.

In theory the distinction between fixed and variable costs is clear, but in practice the distinction between these two costs can become quite hazy. At this time, sophisticated techniques of hospital cost accounting are not widely used. Therefore, it is necessary to exercise great care when determining the proper proportions of total expenditures that are fixed and variable.

A NOTE ABOUT
REVIEWING IN THE
LIGHT OF
REGIONAL PLANNING

In order to achieve maximum effectiveness, prospective rate-setting plans must take into account the objectives of national and areawide planning. Part of the information for the rate-setting process, therefore, will come from other planning agencies. This information may allow the prospective rate-setting system to respond to plans for new facilities and new services, to planned uses of depreciation funds, and to general community need, as defined by community planning bodies.

The integration of prospectively determined rates with other planning activities will require more than just a sharing of information; some formal coordination of the various agencies and third-party payers will probably also be necessary.

CHAPTER FIVE: Units of Payment

TYPES OF UNITS

The prospective rate is finally set in terms of what is called a unit of payment. W. L. Dowling [1974] has treated this topic in some detail, and much of this chapter is based on his previously published work on prospective reimbursement. According to Professor Dowling, the finally approved budget or the allowable increases to the base year payment may be expressed as:

- (1) a budget (total hospital or departmental),
- (2) a capitation (family or person),
- (3) an illness episode,
- (4) an admission,
- (5) an all-inclusive per diem, or
- (6) a charge per service.

Budget
and Allocation

A prospectively established rate based upon an approved budget, whether it is the bottom line or a variety of subtotals, is normally allocated among the various purchasers of care according to some mutually-agreed-upon procedure. A number of allocation formats can be utilized:

- (a) the purchaser may pay the percentage of budgeted costs that is equal to the proportion of the purchaser's patient days to total patient days (the proportion can be determined either historically or currently);
- (b) the purchaser may pay the ratio of charges billed to the purchaser's patients to charges billed for all patients during the prospective period; or
- (c) the purchaser may pay the ratio of charges billed to the purchaser's patients to revenue for all patients during the prospective period [Lewin and Associates, 1974].

Capitation

Capitation is the prepayment of a specific dollar amount per individual (who usually indicates in advance his or her intention to utilize a given hospital whenever hospitalization is required) to the hospital, in return for a commitment to supply all of the hospital services that the individual might require. Payments are based upon the average of past or expected services to patients, rather than the services actually supplied to any given patient.

Illness Episode

A prospective rate based on any illness episode requires the hospital either to provide care at all levels (primary, secondary, and tertiary) or to associate with a medical group or health plan that can provide primary care. The hospital has primary responsibility for the health care needs of an enrolled group, whether or not members of that group require hospitalization.

41 Types of Units: Case or Stay, Per Diem, Charge per Service

Case or Stay Payment based on admissions can take one of two forms: (1) an average payment which is an estimate of the average cost of treating a patient, or (2) a payment based upon a specific diagnosis [Lewin and Associates, 1974]. The average cost can be the average for a given hospital, for a group of peer hospitals, or a normatively derived cost. The magnitude of a payment based on a diagnosis will be directly related to the complexity and duration of the treatment.

All-Inclusive
per Diems All-inclusive per diems, or average costs per patient day, are among the most widely used payment units. They are readily calculable and easily understood by both payer and provider. Projected inpatient costs are simply divided by projected inpatient days.

Charge
per Service Charge-per-service plans attempt to relate the cost and payment directly to each unit of service rendered by the hospital. This approach requires extensive cost analysis and a thorough understanding of the cost structure of the institution so that the computation of a unit charge at various possible volume levels can be made.

THE EFFECTS OF UNITS OF PAYMENT

By choosing a specific unit of payment, the rate setter is implicitly directing the hospital to undertake certain actions to keep actual costs in line with the prospective rate and to alter, to some extent, the way in which it renders care to its patients. The choice of any payment unit can bring with it an undesired change in the delivery of services, so the trade-offs between acceptable and unacceptable alterations must be determined and assessed. Professor Dowling suggests that it is possible to predict the areas of hospital performance that "prospective reimbursement" might affect. The following is his list of cost-influencing factors:

42 Units of Payment

- (1) cases treated,
- (2) case mix,
- (3) length of stay,
- (4) intensity of service,
- (5) scope of service,
- (6) amenity level,
- (7) quality level,
- (8) efficiency,
- (9) input price levels,
- (10) investment in the maintenance and improvement of human and physical resources, and
- (11) teaching programs [Dowling, 1974, page 166].

The Magnitude of the Effects

These cost-influencing variables are paired with the various units of payment to "...show the directions of changes in the areas of hospital performance expected to occur under the different payment units" [Dowling, 1974, page 166]. The relationship between any given cost-influencing variable and any given unit of payment may not hold if and when hospitals are constrained or influenced by forces other than prospectively set rates. The matrix opposite is a static analysis and does not take into account the dynamic nature of hospital services and costs. As Professor Dowling notes in his article:

The matrix does not include cost as an area of performance, despite the fact that cost containment is the central goal of prospective reimbursement. This is because the costs incurred by a hospital depend on the state of its performance with regard to the cost influencing variables. The cost effect of prospective reimbursement results from changes in cases treated, length of stay, quality, efficiency, etc. In the absence of well-specified relationships between the areas of performance and costs, however, the exact cost effect of a given change cannot be predicted. Generally it is just assumed that changes in the "right" direction in some area of performance (if not offset by changes in the "wrong" direction in others) will moderate cost increases [Dowling, 1974, pages 166-167].

Expected changes in hospital performance under alternative payment units

Payment unit	Areas of performance (cost-influencing variables)										
	Cases treated	Length of stay ¹	Complexity of case-mix ²	Intensity of service ¹	Scope of service	Amenity level	Quality level	Efficiency	Input prices	Investment in resources	Teaching programs
Total hospital budget	↓	↓	↓	↓	↓	↓	↓	↑	↓	↓	↓
Departmental budgets	↓	↓	↓	↓	↓	↓	↓	↑	↓	↓	↓
Family or person (capitation)	↓	↓	↓	↓	↓	↓	↓	↑	↓	↓	↓
Episode of illness	↓	↓	↓	↓	↓	↓	↓	↑	↓	↓	↓
Case or stay	↑	↓	↓	↓	↓	↓	↓	↑	↓	↓	↓
Day	↑	↑	↓	↓	↓	↓	↓	↑	↓	↓	↓
Specific services	↑	↑ ³	↑	↑	↑	↓	↓	↑	↓	↓	↓
Cost reimbursement	↑	↑	↑	↑	↑	↑	↑	↓	↑	↑	↑

¹ It is assumed that intensity of service and length of stay are not substitutes (i.e., hospitals do not have to increase intensity in order to discharge patients sooner). Underlying this assumption is the belief that reductions in length of stay would come from the last few days of hospitalization, which are primarily convalescent.

² Admissions and case-mix are interrelated in that the case types that would be denied admission if admissions were reduced would be the least complex. Therefore, the case-mix of hospitalized patients that would result would include a higher proportion of more complex case types. At the same time, however, a hospital could attempt to select easier case types whenever possible.

³ The direction of change in length of stay depends on the occupancy level. If a hospital is operating at high occupancy and has patients waiting for admission, payment on a per service basis should cause it to discharge patients sooner (reducing the average length of stay) in order to substitute patients requiring the more service-intensive first few days of hospitalization. Hospitals operating at low occupancy could both admit more patients and increase the length of stay to increase the quantity of services produced. The direction of change indicated is based on the observation that hospitals have extra or unfilled beds much of the time.

[Reprinted from Dowling, 1974, page 166]

The anticipated static impact on the provision of hospital services caused by the choice of a given unit of payment can be summarized from Professor Dowling's article as follows:

- (1) The budgetary-allocation and capitation approach should cause the hospital to reduce both the quantity (admissions and patient days) and unit costs of services (alter case mix or reduce scope of services) and, therefore, cause a reduction in total hospitals costs.
- (2) It is expected that the impact of the episode-of-illness mode of payment would be the same as that of budgetary allocation and capitation.

- (3) Payment by the case, the day, and by specific services are output-oriented. The use of these payment units should cause hospitals to increase the quantity of cases, days, or services. This will increase total revenues and decrease unit costs, or it will reduce the unit cost by increasing efficiency or reducing the cost and quantity of the inputs that produce a unit of care.

The magnitude of the change in the way in which hospitals provide services and the cost of services is difficult to assess hypothetically. Nonetheless, it is possible to isolate a number of conditions that will influence the size of the change:*

- (a) the tightness of the prospective rate;
- (b) the degree to which the prospective rate forces the hospital to alter certain phases of its operations;
- (c) the size of the incentives and disincentives that will motivate action;
- (d) the nature of the individual hospital's operations (if it is "efficiently" run, the magnitude of the changes will be minimal);
- (e) the role of physicians in determining hospital performance and the extent to which the prospective payment system makes them accountable for hospital costs

[Dowling, 1974, pages 169-170].

* The impact of these conditions is apparent in various prospective payment plans currently in operation. Six plans are described in the following chapter of this monograph.

CHAPTER SIX: Plan Descriptions: Budget Reviews, Formulas, and Hospital Capitation in HMOs

The descriptions presented in this chapter are provided in an attempt to illustrate ways in which the issues and options discussed in the preceding chapters have been put into effect. They were chosen to show differing aspects of plans and the wide diversity among operating plans. The plan summaries that follow do not necessarily reflect SSA endorsement or examples to be emulated.

Each of the plan descriptions contains a section entitled "preliminary results". Although it may be possible to attribute 100% of any comparative cost savings to the prospective rate-setting program, it has not been determined that this is the case. At this time, SSA is funding the systematic analysis of the cost-containment effectiveness of six plans. Until these analyses are completed, the effectiveness of any and all programs can only be assumed.

Much of the information presented in this chapter is based on case studies prepared for the Social Security Administration under grant 5-P16-HS00472 from the National Center for Health Services Research and Development by the Harvard Center for Community Health and Medical Care. Where appropriate, such material

is noted by a citation that includes the first author's last name, and the page cited.

BUDGET REVIEW APPROACHES

The three plans discussed in this section, Indiana, Rhode Island, and New Jersey, are variations of the budget review method of prospective reimbursement: Indiana utilizes a rate review committee sponsored by the State Hospital Association that recommends individual hospital rate increases to Indiana Blue Cross. The rate affects all Blue Cross and private-pay patients and is paid on the basis of charges for service.

Rhode Island's plan concentrates on rate increases resulting from additions in services and facilities. Both Blue Cross and the state are parties to the budget review process as are peer committees from the State Hospital Association. The reviewers regard the input from the areawide planning agencies as particularly important. Payment to hospitals is made on the basis of charges for service.

New Jersey uses the budget-approval approach to rate setting; it is administered by New Jersey Blue Cross and a division of the New Jersey Hospital Association. Both Blue Cross and Medicaid rates are established by this process. Payments are in the form of a per diem.

Indiana

Since 1960, all 110 short-term hospitals in Indiana that are parties to the Blue Cross contract have been paid on the basis of stated charges rather than per-diem expenditure. In essence, this is prospective rate setting by budget review, since a hospital's pro-forma budget is reviewed prior to the granting of a rate increase. The reviews are carried out by a 15-member hospital rate review committee, whose eight public and seven provider members are appointed by Blue Cross. All committee recommendations must be approved by the board of directors of Indiana Blue Cross.

There is no state or local governmental involvement in the rate-setting process. The program was originally devised by the Indiana Hospital Association; it met with the approval of Blue Cross, which takes responsibility for the administration of the plan, and virtually all the governing principles of the

program are initiated by the Indiana Hospital Association's council of finance and reimbursement. The primary objective of the controlled-charge system has never been cost containment. It functions "... to ensure that hospitals receive the full amount of reimbursement they require to provide efficiently the service their communities want from them" [Bauer (4), page i].

The budget-
review process

The review process begins when the hospital submits a formal request for a rate increase to Blue Cross. Each request must be reviewed and approved by the hospital's board of trustees. If the new rate will increase the hospitals' operating revenue less than one-tenth of one percent, Blue Cross has the power to grant the new rate out of hand; however, all such actions must be reported to the rate-review committee. If the rate requested will have an impact of greater than one-tenth of one percent on operating revenues, the request must be formally reviewed. The review committee has one of four options to follow after examining the hospitals' cost-justification data: (a) approve the new rate, (b) approve the rate conditionally, (c) request further information from the hospital, or (d) disapprove the rate increase. In the event of the first option, a recommendation is forwarded to Blue Cross. If any of the latter three options is exercised, the hospital is given an opportunity to respond to the committee, in person, before a final recommendation is made to Blue Cross. Rate changes are effected within three months of the hospitals' original request.

The rate-review committee convenes one day per month to consider hospital rate requests that range from five to twenty-five in number. The reviewers are guided by policies set forth in two Indiana Hospital Association statements, the Principles of Pricing and the Principles of Planning, and they take into consideration such things as: (1) the hospital's general financial condition, (2) special departmental costs and revenue in the area of the proposed rate increase, (3) the hospital's historical record with regard to revenues, cost and utilization, (4) inter-hospital

comparisons as to wages and salaries, and (5) various ad hoc inter-hospital comparisons that may seem appropriate. The reviews are not carried out on a line-by-line basis, nor is an attempt made to utilize economic indices on a regular basis. The review committee pays particular attention to payroll expenses in total, salary scales, and the ratio of employees to occupied beds.

There is one feature of the Indiana rate-setting process that is unique among the plans presented in this chapter : "... rates are designed to include a 3% operating surplus as a contingency reserve, and they are not set for a fixed period; hospitals may request new rate increases at any time, to be effective in three months" [Bauer, (4), page i]. The hospital, therefore, has no incentive to spend less than the allowable per diem, as the financial risk associated with over-spending is minimized.

Preliminary results

Over the four years ending with 1971, the rate-review committee acted on 521 rate requests; it gave outright approval to 313 (60%), partial approval to 117 (22%), conditional approval to 63 (12%), and rejected 28 (6%). There were 117 requests in 1972, of which 56 were approved outright (47.9%), 37 partially approved (31.6%), five rejected (4.7%) and 19 still pending at years end (16.2%) [Bauer (4), Page 32]. Prior to 1966, the percentage of outright approvals was considerably less than the current level. One explanation for this is that as hospitals became familiar with the rate-review process, they were better able to justify their requests. Members of the rate-review committee, however, believe that the committee has become more experienced and therefore does a better job of reviewing presently; as a result, far fewer rate increases are granted for inefficiently run hospitals now than in earlier years of the program. [Bauer (4), page 32].

In a study of the cost-control proficiency of the controlled-charges system from 1958 through 1968, Blue Cross

and the Indiana Hospital Association, with the assistance of the American Hospital Association found that:

- (1) the per-diem cost increase over the period was 25% lower in Indiana than in the U.S.;
- (2) the rate of salary increase was 5% less in Indiana than in the U. S.;
- (3) the number of employees per patient increased 25% in the U.S., while it increased 20% in Indiana;
- (4) the number of beds per 1,000 population in 1968 was 4.0 in the U.S. and 3.8 in Indiana (this measure is thought to be one measure of efficiency);
- (5) total assets per bed had risen 124% nationally, but only 65% in Indiana;
- (6) occupancy increased from 74% in 1958 to 78.2% in 1968, for the U.S. Indiana's occupancy went from 74.4% to 83% over the same period [Bauer (4), pages 36-37].

In 1972, Indiana still compared favorably with the country as a whole, as shown in the table below [figures from Bauer (4) page 37]:

	<u>U.S.</u>	<u>Indiana</u>
Average cost per patient day	\$105.09	\$ 89.95
Average cost per case	\$824.16	\$720.13
1971-72 increase in cost per patient per day	13.8%	11.3%
1971-72 increase in cost per case	11.5%	8.6%
Occupancy rate	75.4%	78.1%
Personnel-patient ratio	3.09	2.86

Hospitals in the state have remained financially viable under the system, which "allows for little fat," and whose goal is "... to encourage their (hospitals) economical management, and to limit their capital expansions in accord with community needs" [Bauer (4), page iii].

Rhode Island

Rhode Island Blue Cross (RIBC), the state hospital association, the state Office of the Budget and the voluntary health planning agency have joined together in an attempt to control the accelerating increase in hospital costs and Blue Cross premiums. In response to a series of RIBC requests for large rate increases, the Director of Business Regulation directed the hospitals and RIBC to devise an alternative to traditional cost reimbursement. This led to lengthy negotiations between RIBC and the hospital association and produced the budget-review program now in force in Rhode Island.

Shortly after these negotiations, the state legislature passed a law directing the state Budget Officer to participate in the budget-review process and giving him access to all hospital budgets. The budget officer, representing both state and public interests, is responsible for the Medicaid prospective rate. All of the state's fifteen short-term hospitals undergo an annual budget review and receive a prospective rate for RIBC and Medicaid patients.

The budget-review process

The major thrust of the Rhode Island budget-review program is toward controlling hospitals that plan to offer new medical services, which were thought to be the most important cause of rising hospital costs. RIBC and Medicaid reimbursement for new services became directly tied to the recommendations of areawide health planning councils. In the first step of the review process, these councils determine the "...overall priorities of the community's needs for different types of programs..." [Bauer(3), page i], and make recommendations concerning new service proposals.

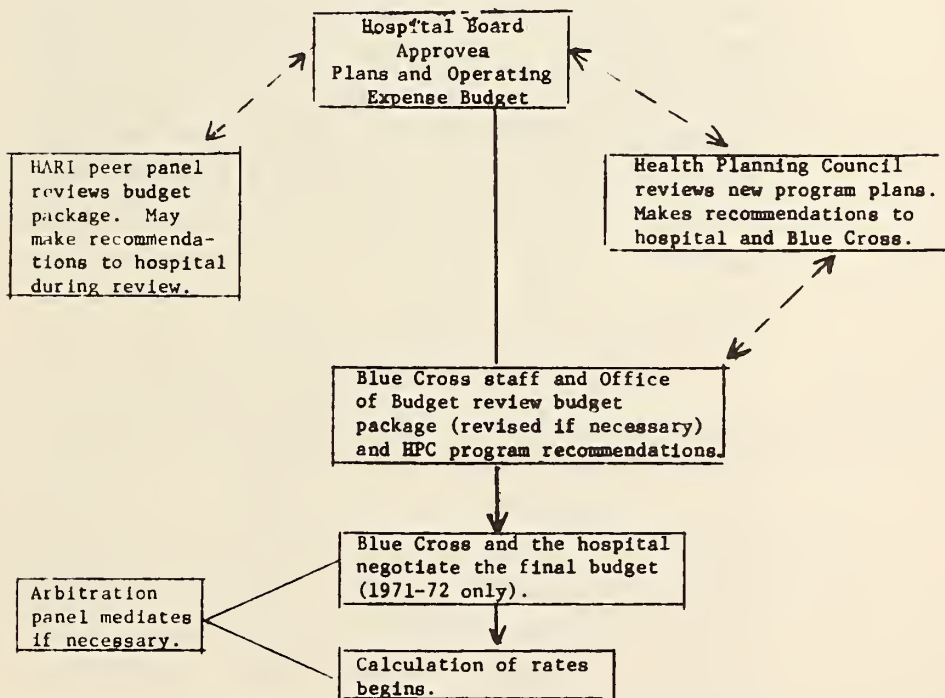
The second step in the review process is a perusal of each hospital's operating budgets by peer committees from the Hospital Association of Rhode Island (HARI), by RIBC analysts, and by the director of the Rhode Island Office of the Budget in order to "spot any areas in which costs are out of line" [Bauer (3), page i].

RIBC and HARI have designed cost and statistical report forms to be submitted with the hospital's proposed budget, three months prior to the start of its fiscal year. The budget and

reports emphasize new and expanded medical programs and allow the reviewers to distinguish between discretionary and uncontrollable cost increases. In addition, the sponsors of the program have developed a manual for uniform cost reporting. The budgets and reports are then reviewed by:

- (1) a peer review committee made up of hospital administrators, controllers, and trustees, all of whom are appointed by the hospital association;
- (2) the areawide planning agency, which passes on the merits of new or expanded medical services that will significantly increase operating costs; and
- (3) RIBC and the Rhode Island Office of the budget.

The budget and program-review process is depicted below:



The calculation of the prospective rate is made by RIBC from the final negotiated budget specified in the RIBC contract. In 1971 four distinct rates were set:

- (1) An adult rate for routine inpatient services based on a relationship for projected inpatient days to projected routine care costs;
- (2) nursery and delivery room rates based on projected nursery days and projected deliveries, again related to projected costs;
- (3) per-visit rates for outpatient care, emergency care and minor surgery visits; and
- (4) separate RCC (ratio of costs to charges) percentage for reimbursement of ancillary services [Bauer (3), page 15].

Budgets are negotiated through a liaison committee* during the review process: following these negotiations the prospective rate and budget are fixed, provided actual volume does not deviate more than a stated percentage from projected volume. Monthly financial and statistical reports are compiled by each hospital and submitted to RIBC, which compares them with each hospital's budget projections. At year's end, budgeted hospital expenses are compared to actual expenses; if budgeted expenses are greater than actual, the hospital and RIBC split the savings. If budgeted expenses are less than actual expenses, the hospital absorbs the total loss.

Preliminary results

There has been no systematic evaluation of the Rhode Island system, but some comparative statistics are available; these are tabulated on the opposite page. These statistics indicate that during the early years of the program the rate of increase in both hospital expenditures and Blue Cross rate requests subsided on an absolute and comparative basis. The budget-review process actually effected reductions for the fiscal years 1970-1971 and 1971-1972, as shown in the brief tables at the top of page 54.†

* The committee is made up of six members of each from RIBC and the hospitals.

† Rhode Island Hospital was the only hospital during 1970-1971 that utilized a prospective rate-setting system.

Comparisons of Annual Percentage Change in Hospital Expenditures
for Non-Federal Short-Term and Other Special Hospitals:
Rhode Island, New England, and United States, 1967 - 1972*

Percentage of Growth over Previous Year

<u>fiscal year</u>	<u>Rhode Island</u>	<u>United States</u>	<u>New England</u>
1967 - 68	21.7%	17.2%	18.3%
1968 - 69	16.4	17.3	18.9
1969 - 70	14.8	17.7	17.5
1970 - 71	16.8	14.5	14.2
1971 - 72	10.3	14.1	11.4

*Rhode Island Health Services Research, Inc., (SEARCH) compiled this table, using the following sources: Blue Cross of Rhode Island figures for 1967 - 72, based on audited costs; Hospitals, Journal of the American Hospital Association, Guide Issues, August 1968, August 1969, August 1970, August 1971; Hospital Statistics 1971, American Hospital Association, August 1972; and Hospital Statistics 1972, American Hospital Association, August 1973.

Source: Bauer (3), page 51.

Rate Increases, Rhode Island Blue Cross, 1968 - 1973

<u>filing date</u>	<u>for calendar year</u>	<u>increase requested</u>	<u>increase granted</u>
9/28/67	1968	1.95%	1.95%
9/30/68	1969	38.33	32.91
8/15/69	1970	24.48	18.00
9/25/70	1971	37.66	24.69
-	1972	none	-
-	1973	none	-

Source: Bauer (3), page 52.

Budget Negotiation Results - Rhode Island
Hospital, Fiscal Year 1970-71 (approximate figures)

Budget first proposed by hospital	\$38 million
Projected increase over current year	16.9%
Reduction of budget during negotiations	\$ 1 million
Revised projected increase over current year	12.9%

Source: Bauer (3), page 47.

Budget Negotiation Results - All Voluntary Hospitals In
Rhode Island, Fiscal Year 1971-72 (approximate figures)

Aggregate budgets first proposed by hospitals	\$144 million
Projected increase over current year	17.3%
Reductions agreed to	\$ 6 million
Revised projected increase over current year	12.9%

Source: Bauer (3), page 48.

During the 1970-1971 fiscal year, Rhode Island Hospital actually spent \$250,000 less than its reduced budget while experiencing an increase of 2,008 admissions. The one-million-dollar reduction in the proposed budget was almost equally distributed among the delayed opening of new facilities, the abandonment or postponement of new medical programs, and the exercise of more efficient operations.

The statewide experience in 1971-72 was similar. Of a six-million-dollar aggregate budget reduction, \$3.8 million was voluntarily cut by hospitals and the remaining \$2.2 million was cut after mediation by the liaison committee. The majority of these budget cuts were either the result of the abandonment or postponement of new medical programs. In total, the hospitals actually spent less than the \$138 million budgeted, and there was an \$800,000 savings attributable to RIBC patient days.

During 1971-1972, the first full year of the program, the average daily cost of hospital care across the state increased by 10.2%. Although some of the hospitals overspent their budgets, the majority came in under budget.

New Jersey

Rate ceilings based upon retrospective cost reviews were first imposed in Blue Cross payments to hospitals by New Jersey's Commissioner of Insurance in 1958. In 1970, because of the continuing rapid rise of hospital costs and Blue Cross premiums, the Commissioner gave the hospitals a choice of continuing to operate under the ceiling rate or with a prospective-year budget review.

The New Jersey budget-review program has two primary objectives: (1) "... to determine whether each hospital's budget request is reasonable and, to the extent that it is found to be unreasonable, to reduce its original bottom-line budget figure accordingly, and identify the areas where savings could be effected," and (2) "... to upgrade the overall operating efficiency of all New Jersey hospitals by continually improving the quality of individual hospital management" [Bauer (5), page 14]. Approximately one-half of the hospitals chose the budget review over the rate ceiling option in 1970; since 1972 almost all have done so as a result of the passage of the 1971 Health Care Facilities Act [Chapter 136, New Jersey Laws].

The budget-
review process

With the passage of this act, setting the rates that intrastate and third-party payers would pay hospitals became the joint responsibility of the Commissioners of Health and Insurance. The law establishes a uniform accounting system by which the Commissioners judge costs:

The Commissioners of Health in consultation with the Commissioner of Insurance shall determine and certify the cost of providing health care services, as reported by health care facilities, which are derived in accordance with a uniform system of cost accounting approved by the Commissioner of Health. Said certification shall specify the elements and details of cost taken into consideration. [from Bauer (5), page 8].

The commissioners rely on an advisory committee to carry out the budget review. This committee is an unsalaried group primarily composed of hospital administrators and trustees. The

Advisory Committee has developed guidelines to evaluate costs relating to medical education, physician coverage, length of stay, radiology and pathology services, leasing versus purchasing of equipment, management programs, and data-processing services.

The reviews are carried out by six subcommittees of the Advisory Committee. Each subcommittee is composed of one physician, a trustee, a consumer, and two hospital administrators. The chairman or vice-chairman of the whole Advisory Committee attends each review session. The subcommittees are responsible for about seventeen hospital reviews per year. The review process continues from December through June; subcommittees meet twice monthly.*

A division of the Hospital Research and Education Trust (HRET) of the New Jersey Hospital Association also assists the Advisory Committee in performing reviews. The division's staff is made up of a former hospital administrator (the director), an accountant (the associate director), four budget analysts, and three clerks. The division is financed by fees collected from the hospitals according to the following schedule: †

<u>hospital size</u>	<u>charge for budget reviews</u>
less than 100 beds	\$1,000
100 to 200 beds	\$1,400
200 beds and more	\$1,750

Source: Bauer (5), page 17.

It is the responsibility of the HRET budget-review staff to analyze hospital budgets and costs, visit hospitals to become familiar with special situations, and assist the Advisory Committee in the preparation and revision of standard budget forms and guidelines.

* There are a total of about 72 meetings annually, or 450 man-days volunteered. This does not include full committee meetings.

† The average budget review is estimated to cost between \$1,500 and \$2,000, exclusive of Advisory Committee time. Cost reviews average about \$500. The annual cost of the HRET portion of the budget review program is about \$200,000 [Bauer (5), page 20].

The review process begins with the preparation of a pro forma budget by the hospitals. After approval by the board of trustees, it is forwarded to the HRET. The HRET staff reviews the budget forms for completeness and internal consistency, then dispatches copies to Blue Cross for further analysis. After the final analysis by the staff, a report is submitted to both the hospital and an advisory subcommittee. The subcommittee uses the report and any other data the hospital believes relevant as bases for recommendations to the full Advisory Committee, which in turn issue a final report and recommendation to the Commissioners of Insurance and Health.

The Commissioners, acting on the committee's findings, establish the prospective per-diem rate for the hospital. The appropriate third-party payers are then notified, who in turn inform the hospital. The hospital has the right to appeal either the subcommittee recommendations or the final rate. The rate usually does not become effective until April of the prospective year. Each hospital is paid the new ceiling rate established by the Commissioner of Insurance until the prospective rate becomes effective.

During the year, hospitals send quarterly reports to Blue Cross and HRET that contain previous and current year operating expenses, admissions, inpatient days, and average cost per diem. These reports are used to compare actual with projected volume and expenditures. If, at the end of the year, actual costs are less than budgeted costs, the hospitals are required to refund the difference to Blue Cross; if the hospitals overspend their budgets, they must either absorb the loss or apply to the Advisory Committee for a cost review.*

The reviewers pay particular attention to the relation between projected and actual performance and the extent to which the

* Each hospital must pay for a cost review: hospitals of less than 100 beds pay \$300; 100 to 200 beds, \$450; and 200 beds or more, \$550 [Bauer, (5), page 19].

hospital acts on cost control recommendations made by the committee during the original budget review.

The chart on the opposite page depicts the New Jersey budget-review process.

Early results

There has been no systematic evaluation of the effectiveness of the New Jersey budget-review program, but it is possible to gain some insights into the program's impact on hospital cost containment by the use of comparative statistics:

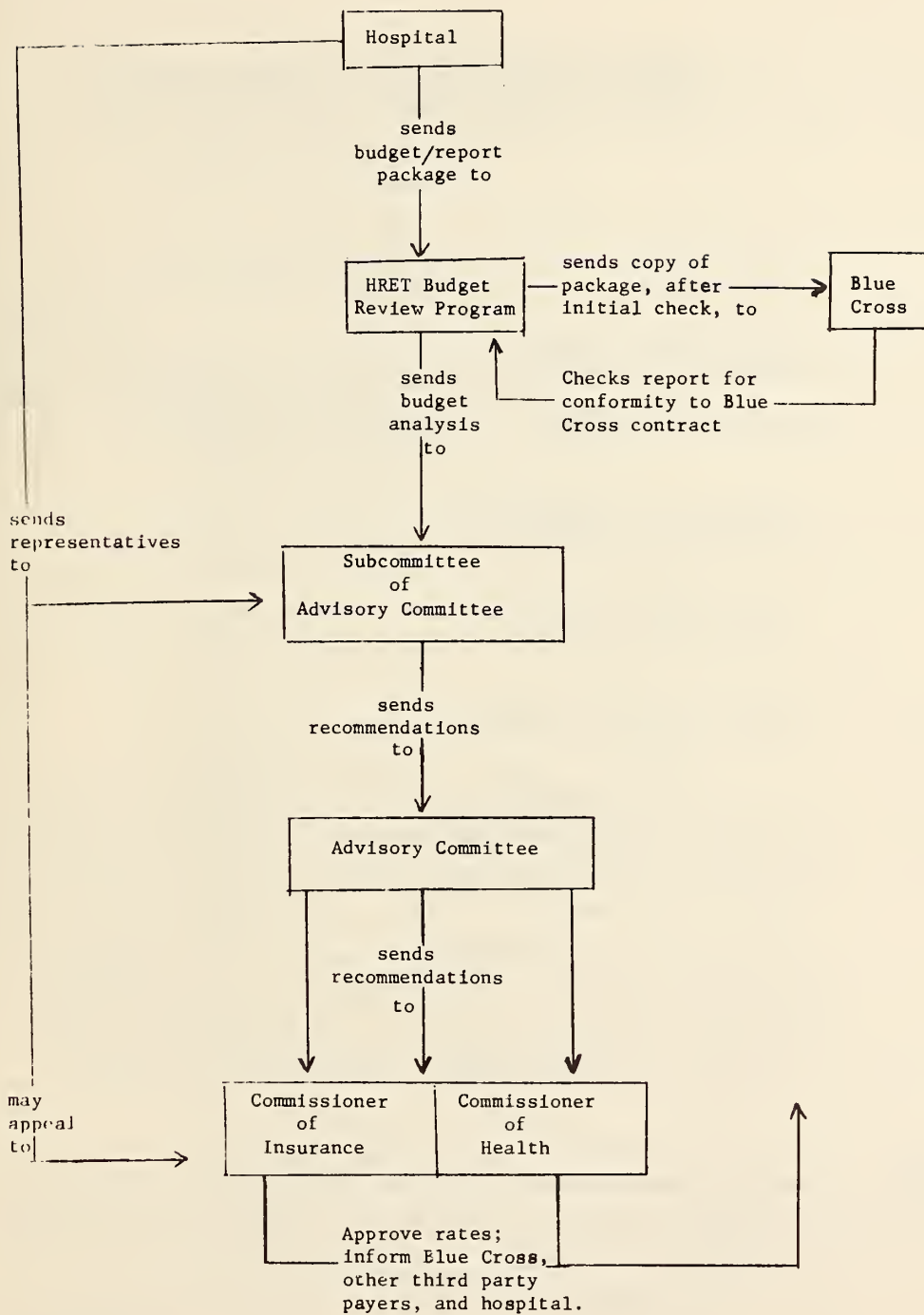
Percentage Increase in Hospital Costs: United States,
New Jersey, New York, and Pennsylvania, 1969 - 1972

	<u>Payroll</u>	<u>Other costs</u>
United States	35.9%	40.8%
New Jersey	31.0%	38.0%
New York	41.0%	43.0%
Pennsylvania	40.0%	43.0%

Source: Bauer(5), page 62.

It is not clear to what degree the rank of New Jersey in this table can be attributed to budget review. The fact that New Jersey has only one teaching hospital, its proximity to New York City and Philadelphia (where many New Jersey residents seek tertiary medical care), and the state's certificate-of-need program have all contributed to the lesser rate of increase in New Jersey, compared to neighboring states and the country as a whole. However, it should be noted that the Advisory Committee did recommend total aggregate reductions of \$56 million over the years 1971, 1972, and 1973. (See page 60.)

59 Budget Review: New Jersey



Amounts and Proportions of Reductions Effected by
New Jersey Budget-Reviews: Review Years 1971-73

	<u>1971</u>	<u>1972</u>	<u>1973</u>
Total budgets submitted by hospitals	\$540,000,000	\$721,000,000	\$800,000,000
Total budgets recommended by Advisory Committee	<u>528,000,000</u>	<u>695,000,000</u>	<u>782,000,000</u>
Total dollar reduction	\$ 12,000,000	\$ 26,000,000	\$ 18,000,000
Average dollar reduction in submitted per-diem rate	1.84	3.28	2.14
Average percent reduction in submitted per-diem rate	2.03%	3.60%	2.22%

Source: Bauer (5), page 60.

There is evidence to indicate that New Jersey hospitals have begun to deal with prospective rate setting with greater ease over time. When rates were increased by 11.2% in 1971, 75% of the hospitals that submitted to budget reviews overspent their budgets by \$7 million. This was less than a 1% overrun of the total projected expenditures, and close to \$3.5 million of the total overrun was spent by the one teaching hospital in the state; approximately 40 other hospitals accounted for the balance.

FORMULA
APPROACHES

Formula methods are employed in Western Pennsylvania and New York; these methods differ in their basic approaches toward prospective rate setting.

The program in Western Pennsylvania is administered by Blue Cross of Western Pennsylvania, which utilizes a budget review

and approval technique to establish a base rate. A formula is then applied to the base to determine the maximum allowable operating and non-operating costs. Payments are made on the basis of per-diem charges.

In New York all Blue Cross and Medicaid rates are set by formula and paid as a per diem.

Western Pennsylvania

In 1971 Blue Cross of Western Pennsylvania began an experiment in the prospective payment of hospitals for inpatient services. The experiment combined the budget-review and formula methods of setting hospital rates prospectively in an attempt to help hospitals operate more efficiently and to confine increases in hospital expenditures to a magnitude in keeping with other sectors of the general economy. Blue Cross now conducts the prospective-reimbursement program within the context of a cost-control contract negotiated in 1973. The contract complies with the guidelines for cost control set down by the Pennsylvania Commissioner of Insurance. These guidelines integrate third-party payment of hospitals, managerial control, areawide planning (new facility construction and equipment purchases), and service facilities reviews into a cost-containment effort administered by Blue Cross. The state does not formally participate in the cost-containment effort.

The rate-setting
process

Five small hospitals in the northwestern portion of the state are participating in the experiment. The task of setting the rates has been characterized as "long and arduous" by the rate-setting staff [Bauer (1), page vi], which is composed of two full-time reimbursement analysts, a half-time reimbursement supervisor, and clerical aides who receive overall direction from the Blue Cross director of reimbursement programs. The staff operates with the philosophy that it should not attempt to correct for past inefficiencies but should act to modulate them in the

current and prospective years by controlling the rate of change of allowable charges. The process by which the per-diem rates are actually set is quite lengthy; the reimbursement analyst spends four days, at the minimum, in each hospital in order to arrange the data in a form that is amenable to analysis [Bauer (1), page 16].

The actual analysis begins six weeks prior to the prospective rate year when the hospitals submit their prospective budgets and current year expense estimates to Blue Cross. These statements are subjected to a line-by-line examination and compared with the preceding two years by an analyst. Base-year parameters used for the line-item review and comparisons are predetermined. Items that are greater than the guidelines become subjects of further analysis and negotiation between the hospital and the rate-setting agency.

Once the budget has been reviewed and accepted, a formula is applied to establish the maximum permitted increase in the inpatient per-diem rate for operating and other expenses. In general terms, the formula operates in the following way:

- (1) determine the actual per-diem operating cost for the base year;
- (2) determine the maximum permissible increment in operating expenses for the current year;
- (3) determine the maximum permissible increment in operating expenses for the prospective year;
- (4) determine the projected per-diem amount of other expenses;
- (5) calculate the prospective rate by adding the prospective operating and other per-diem costs [Bauer (1), pages 23-24].

There are maximums only for operating expenses, which are subject to the lower of (a) the hospital's budgeted per-diem rate of change by category of operating cost or (b) the average of the individual hospital and of its hospital group's operating expenses. The Blue Cross prospective rate is the sum of the operating and other expenses.

Additions to operating costs resulting from new services or facilities that have received planning agency approval are not included in the formula calculation. They are determined to be a separate item for a period of two years, then they are added to the base. This is to ensure that the new services and facilities are appropriately reimbursed.

There is no provision for retroactive adjustment of rates, although a review is possible in the event of fire, flood, and other unforeseen events. In addition, hospital rates are adjusted twice a year in accordance with the movement of economic indices, which are renewed monthly to compare their actual experience to the projections. If there is a substantial variance between the two in any month, an adjustment is made. (See chart on page 64.)

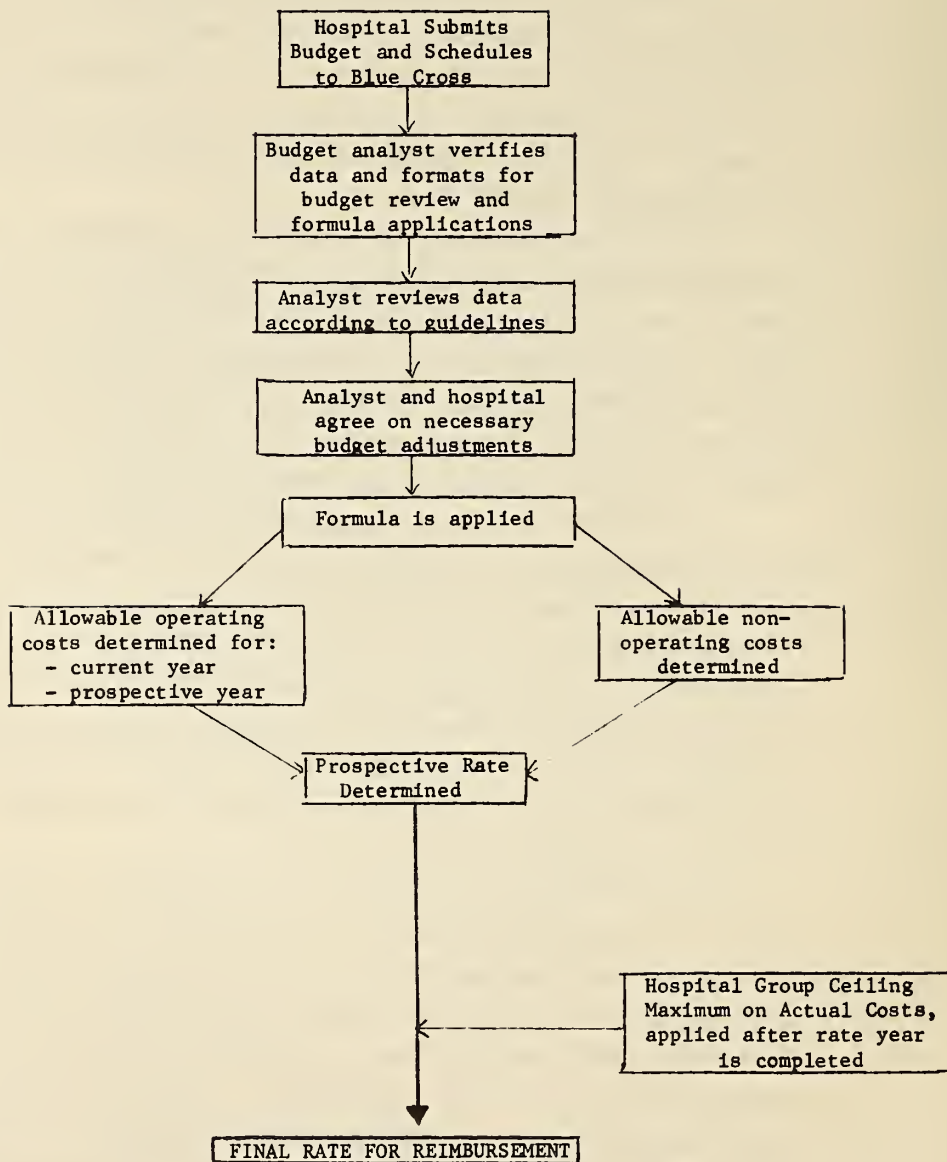
Preliminary results

The effectiveness of this prospective rate-setting experiment is under evaluation. An informal review of some comparative statistics, however, does imply the accomplishments of the program: Between 1971 and 1972 a total of about \$785,000 was deducted from the hospitals' original budgets, which totalled \$11.5 million. This was a reduction of about 4.5%. The budget review accounted for almost \$510,000, and the formula another \$275,000. About 66% of the reduction was in salaries, wages, and fringe benefits [Bauer (1), page 37].

When the five test hospitals were compared to a control group of six similar institutions, it was found that the average rates of change in audited Blue Cross per diems and in total expenses were lower for the test group, although both groups had 10% fewer patient days that year. In addition, the rate of cost increases in the test group was dampened by 28%, while within the control group the rate of increase grew by 64% [Bauer (1), page vii] The average cost of establishing prospective rates was about \$8,000 per hospital.

The five hospitals that participated in the experiment fared remarkably well financially during their first year, given the fact that they were faced with an entirely new financial environment. The

Formula: Western Pennsylvania



situation was characterized by revenue constraints, and the hospitals had little prior experience in budgeting, financial planning, and management that would allow them to react with maximum effectiveness. In spite of this, the hospitals overspent their budgets by a mere 1.4% per diem (\$.96), a total of \$51,800 for the five hospitals.

Total Prospective and Audited Per-Diem Variance
in Five Hospitals

<u>hospital</u>	<u>dollar-variance</u>	<u>variance related to Blue Cross days</u>	<u>percent actual costs over (under) budget</u>
A	\$6.35	\$26,676	10.27%
B	3.34	37,896	5.12
C	2.27	8,853	3.36
D	(3.54)	(17,277)	(6.20)
E	(1.08)	(4,362)	(1.45)

Source: Bauer (1), page 39

The actual effect of the variance on the hospitals was not as great as the numbers in the table above might indicate. Blue Cross shares any gains or losses the hospital might experience on an equal basis with the hospital. The analysis of 1972-1973 has not been completed as yet, but preliminary results indicate that there was little change between the two years.

Six new hospitals joined the prospective rate-setting program during 1974, and Blue Cross anticipates adding more analysts and clerical personnel to the rate-setting staff.

New York

The New York Cost Control Law of 1969 directs the state Commissioner of Health to be "reasonably certain" that the per-diem rates paid to hospitals by Blue Cross and Medicaid are related to the cost of efficient production of services. [Bauer (6), page i]. The

Commissioner of Health exercises his responsibility by certifying the Blue Cross and Medicaid rates that are approved by the Superintendent of Insurance and by the Budget Director, respectively. Although the Cost Control Law does not define "efficient," it does provide a number of factors that the health commission should consider when certifying rates:

- elements of cost,
- geographical differentials in elements of cost,
- economic factors in the hospitals' area,
- rates of increase or decrease of the area's economy,
- costs of hospitals of comparable size,
- need for incentives to improve services and encourage economy,
- economies and improvements in service to be anticipated by the operation of joint central services, and
- economies to be anticipated from alternatives or substitutes for the whole or any part of in-hospital services [Bauer (6), page 4].

The law specifically excludes costs that are not directly related to patient care, such as research and education expenses incurred by hospitals.

Under the current administration of the law, four basic principles guide the reimbursement of hospitals:

- (1) rates are set prospectively with no year-end adjustment;
- (2) rates are set by formula, where peer-group ceilings are established on routine services;
- (3) rates are based on historical costs with no consideration of future service expansion, but projections are based on price movements external to the hospital industry; and
- (4) rate adjustments are made for underutilized services or services not approved by the Commission of Health [Bauer (6), page 4].

The rate-setting
process

Three formulas for the actual setting of rates have been developed: (1) a statewide Medicaid formula, (2) a down-state Blue Cross formula serving its 185 member hospitals in the \

Greater New York City area, and (3) an upstate Blue Cross formula serving the 140 Blue Cross member hospitals outside of the New York City metro area. Each of these formulas differ in some degree, but the four basic guiding principles are adhered to by all the plans. The basic principles were incorporated into a number of regulations to which all formulas must conform. The principle features of these regulations, as stated in the law itself are:

- Each hospital's allowable costs for inpatient care are determined for the last fiscal year for which its Uniform Financial Report is available.
- This results in an interval of two years between the base period and the period in which the new rate is to be in effect; i.e., 1972 costs are used to project the hospital's 1974 rate. .
- Ceiling limits are set on the hospital's actual costs, based on the experience of peer-group hospitals. Within these limits, a base rate is established for the hospital.
- Trend factors are used to project increases in costs during the interval between the base year and the mid-point of the prospective rate period.*
- An appeal may be made through established processes, but rates may not be adjusted retroactively.
- After the base-year figures have been audited (a period of 18 months to two years), the current-year and prospective-year rates are adjusted accordingly.
- In no event may the total payments to a hospital for a period exceed the total charges of that hospital for the services covered [Bauer (6), pages 12-16].

The data required for the calculation of each hospital's base year is taken from a common information base of the Uniform Financial Reports. The reporting system has been in use throughout the state since 1967 and was made the responsibility of the

* Blue Cross and Blue Shield of Greater New York also employs a second means of trending.

Department of Health by the Cost Control Law of 1969. The reporting forms and schedules cover all aspects of hospital operation.

Rate increases sought by hospitals that want to maintain new or expanded programs and services must first be approved by the appropriate planning agency and then justified to Blue Cross and the Department of Health through special appeals. Such occurrences as substantial changes in the economic status and an expansion of services, as necessary improvement in the quality of care, and the anticipated improvement in efficiency of projected long-term cost savings qualify as grounds for appeal and rate adjustments. In addition, hospitals may appeal their formula-set rates for events that are beyond their control.

Preliminary results

The administration of the New York prospective rate-setting plan is carried out by the Division of Health Economics of the state Department of Health for Medicaid and the State Blue Cross plans. There are no figures available for the cost of administering the Blue Cross rate-setting apparatus, but the costs may be inferred from the fact that the state employs a staff of 22 individuals to establish rates and hear appeals for 1,400 health facilities in the state including hospitals, nursing homes, and home health agencies. The annual personnel budget for these activities is \$450,000.

The financial effect of prospectively set rates upon the hospital system has been somewhat traumatic. In 1971, 112 of 241 hospitals surveyed by the Hospital Association of New York state experienced \$44.5 million in deficits. During 1972 and 1973 deficits resulting from inpatient services begun to appear in the large teaching and community hospitals in the New York City area. The differences averaged two to three percent of the downstate Blue Cross rate of payment. At the beginning of 1974, a number of hospitals were in danger of bankruptcy. The overall effect of the financial squeeze has not been resolved, but it has been observed that

teaching hospitals have lessened the pace of new program expansion and management-engineering services are being used more widely.

CASE OR STAY
AND
HMO CAPITATION

Blue Cross of Northeastern Pennsylvania is carrying on a small experiment in payment per case. The rate is determined by a budget review process. This plan description could have been included in the budget review section. Since it is the only plan utilizing an admissions unit of payment, it is treated separately.

A brief discussion of capitation payments in HMOs is provided for those who are unfamiliar with this method.

Northeast
Pennsylvania:
Admission or
ayment-per-Case

In the prospective payment program adopted by Blue Cross of Northeast Pennsylvania (BCNP), a predetermined sum is paid for each Blue Cross subscriber admitted to a participating hospital. This method is unique among the six state programs described here. BCNP did not use the per-diem method of payment because, in the opinion of its analysts, too few physicians showed a knowledge of or concern for the economics of care, and because few hospitals in the northeastern part of the state used sufficiently reliable budgeting techniques for a budget-review process to be effective. Therefore in 1972 the payment-per-case, or admission, approach was instituted to involve physicians and hospital administrators directly in reducing hospital length of stay.

The program is being carried out on an extremely limited basis; only two 100-bed hospitals are participating, both voluntarily. The impetus for the experiment came from the BCNP staff, and it received approval from the BCNP Advisory Council and its Board of Directors. The hospital advisory council lent its support to the project because

of its small scale and voluntary nature.

The admissions payment option was offered to a few hospitals that BCNP believed would be best able to get the program off on the right foot. Wyoming Valley Hospital of Wilkes-Barre, the first hospital to enter into an admission-payment arrangement with BCNP, joined on January 1, 1972. St. Joseph's Hospital of Hazelton joined the plan on July 1, 1973.

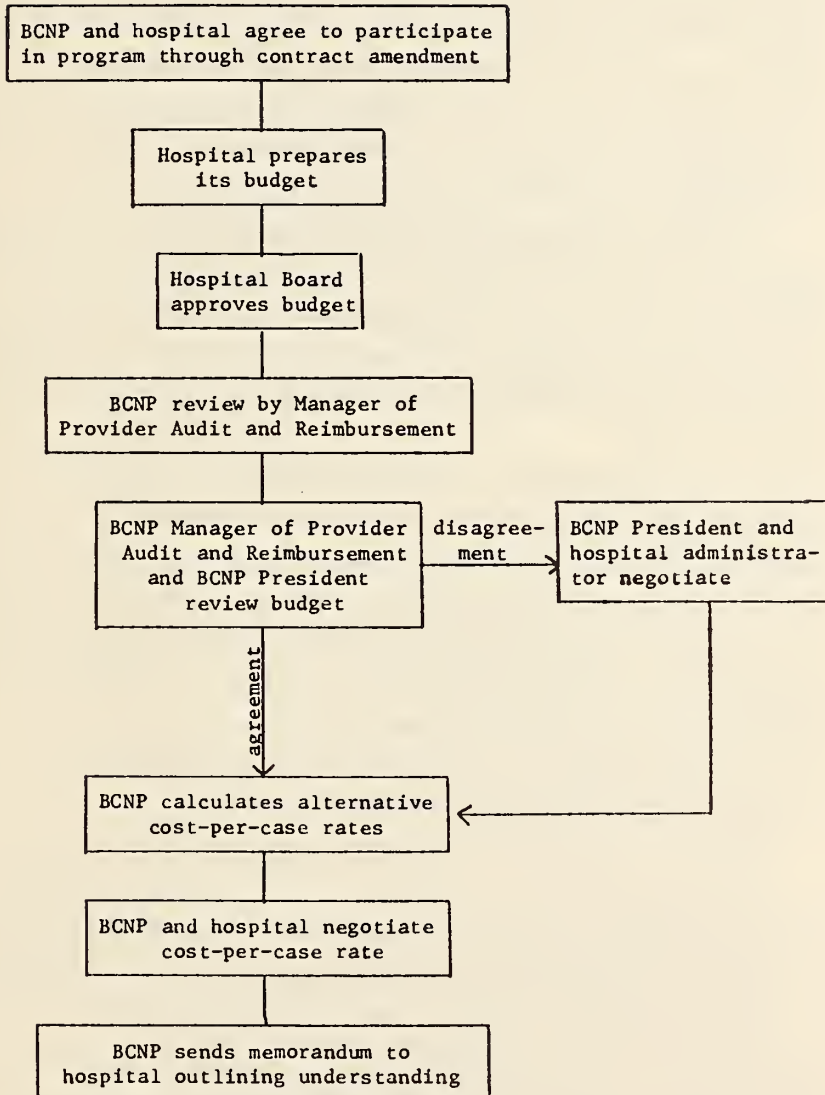
Because capitation is a novel technique in prospective payment, BCNP has managed the program "... on an informal, flexible and personalized basis" [Arthur D. Little, page 7]. The program can be summarized as consisting of six elements:

- (1) Where hospital budgets are the basis of admission, prospective payment are guided by the BCNP contract of 1967, as amended.
- (2) Budgets for the current and prospective year are prepared by the hospital and reviewed by BCNP.
- (3) Inpatient cost data are transformed into a cost-per-case payment when the budget is agreed upon.
- (4) During the first year in the program the hospital is not at risk. If the hospital overspends, BCNP will make up the difference; if the hospital underspends, it can retain 50% of the savings. After the first year the hospital is at full risk, retaining 100% of its gains and absorbing 100% of its losses.
- (5) If actual case volume varies by more than 2% of budgeted volume, a rate review is made and new rates may be established.
- (6) In the event of an unpredictable or uncontrollable happenstance, rates may be reviewed and renegotiated [Arthur D. Little, page 7].

Rate-setting methods

The rate-setting procedure in Northeastern Pennsylvania (charted on the opposite page) is quite similar to that utilized in the budget-review method. The hospital prepares a pro forma budget

THE RATE SETTING PROCESS



(forms are provided by BCNP); after it has been approved by its board, it is submitted to BCNP for review. First, BCNP sets a maximum allowable percentage increase in the current year's cost-per-case; this maximum allowable percentage increase can vary from year to year and hospital to hospital.* Next, the president of BCNP and the manager of provider audit and reimbursement conduct the budget reviews. If these two officials find any item in the budget objectionable, they negotiate a settlement with the hospital.

Once the budget is approved by both parties (the hospital and BCNP), various cost-per-case rates are calculated and compared with the one submitted by the hospital. The payment that is determined is a function of the margin of flexibility and of the assumptions that underlie the hospital's projections of volume and length of stay.

At the urging of BCNP, Pennsylvania Blue Shield (PBS) embarked on an experiment of its own in the Wyoming Valley Hospital. Throughout 1972, five attending physicians at the hospital were paid a flat fee for each diagnosis made. A schedule of payment for 15 diagnoses were developed by the PBS staff and agreed upon by the physician. The program has been expanded to include nine physicians in St. Joseph's hospital.

The payment-by-case approach gives the physician a clear incentive to decrease length of stay.

BCNP and PBS agree that when payment-by-diagnosis approach works as intended, Blue Cross payout per case is reduced at the expense of a somewhat increased Blue Shield payout. The net gain from the 'system' comes from the fact that paying a physician for an expected day of hospital care that he did not in fact deliver due to an earlier discharge is considerably less than the costs of that day would have been for Blue Cross [Arthur D. Little, page 14].

BCNP and PBS have developed an approach that allows PBS to share a percentage of the savings that accrues to BCNP according to the five steps listed

* In the first year of the program it was set at 12%; in the following years it has been reduced to 6%.

- (1) PBS collects length of stay data;
- (2) reductions in length of stay are the difference between the average (calculated from the Pennsylvania Hospital Utilization Project (HUP) and Professional Activities Study (PAS) records for the given hospital) and the actual length of stay;
- (3) total BCNP savings is equal to the number of days saved, multiplied by the cost per patient day;
- (4) PBS shares the portion of BCNP savings that are attributable to reductions in length of stay;
- (5) PBS can receive 50% of the BCNP share of savings up to actual overpayment [Arthur D. Little, page 16].

Preliminary results

The combined program in this state has not yet been formally evaluated, but early results from Wyoming Valley Hospital look promising:

- (1) For the first six months ending December 31, 1972: length of stay decreased by 12.7%; Blue Cross cost per patient day decreased by 2.6%; total cost per case (physician plus hospital) decreased 15%; total dollar savings equalled \$61,390.
- (2) For the second period, 12 months ending June 30, 1973: the new prospective rate of \$516 per case decreased \$39 (7%) from the prior year's rate; the hospital's costs were \$16.27 less than the cost-per-case prospective rate [Arthur D. Little, page 17].

Hospital Capitation
In HMOs

Capitation is one method of paying for hospital care in a health maintenance organization. Under such an arrangement the hospital would be paid a fixed sum per HMO member per year, regardless of the amount of hospital care (if any) actually used. At this time, few such capitation arrangements exist. The larger, well-established HMOs often own and operate their own hospitals, but the smaller, newer HMOs usually purchase hospital care for their members from a

local hospital and pay the hospital in the same way that the hospital is paid by other purchasers of care.

The largest HMO-type organization, the Kaiser Foundation Health Plan, utilizes a prospective budget approach for payment to the Kaiser Foundation Hospitals. While the budget can be readily converted to a capitation basis, it is not developed in that manner:

It is done on a global basis, taking into account the total hospital financial requirements as developed through a detailed budget and as reviewed and approved by hospital management and ultimately regional management. Hospital revenue from non-health plan sources is offset against this total requirement and the balance is the net financial requirement. It is a total amount of money needed from the health plan for the year [Somers, 1971, page 86].

In some of the Kaiser regions, part of any net earnings above total budget hospital and professional services costs is paid as a "bonus" to the hospitals. In this way, the hospital is closely linked to the overall performance of the entire plan.

Similar arrangements exist in hospital-based HMOs. The Columbia Medical Plan in Columbia, Maryland, and the Metro Health Plan in Detroit are examples. The Columbia Hospital and Clinic Foundation receives a capitation payment for each member. From this it pays the expenses budgeted by the medical group as well as covers the cost of providing hospital services at its own and other hospitals.

In the Metro Health Plan, Metropolitan Hospital receives a capitation payment for each member that includes an amount for physicians' services. These services are provided by salaried physicians on the staff of Metropolitan Hospital.

Thus, in most cases when hospital care is paid for on a capitation basis by an HMO, the hospital is itself an integral part of the HMO. This is not surprising, since the hospital itself has relatively little control over many of the major determinants of hospital cost, and hence will be unlikely to independently assume the risks involved in a capitation arrangement.

REFERENCES

Bauer (1) , Katharine G. April 1974. The Combined Budget Review and Formula Approach to Prospective Reimbursement by the Blue Cross of Western Pennsylvania. Harvard Center for Community Health and Medical Care.

Bauer (2), Katharine G. December 1973. Containing Costs of Health Services Through Incentive Reimbursement. Harvard Center for Community Health and Medical Care, Cases in Health Services Series No. 4.

Bauer (3), Katharine G., and Arva Rosenfeld Clark. February 1974. Budget Reviews and Prospective Rate Setting for Rhode Island Hospitals. Harvard Center for Community Health and Medical Care.

Bauer (4), Katharine G., and Arva Rosenfeld Clark. March 1974. The Indiana Controlled Charges System. Harvard Center for Community Health and Medical Care.

Bauer (5), Katharine G., and Arva Rosenfeld Clark. March 1974. The New Jersey Budget Review Program. Harvard Center for Community Health and Medical Care.

Bauer (6), Katharine G., and Arva Rosenfeld Clark. March 1974. New York: The Formula Approach to Prospective Reimbursement. Harvard Center for Community Health and Medical Care.

Dowling, William L. September 1974. "Prospective Reimbursement of Hospitals", Inquiry. Vol. XI.

Feldstein, Paul J. 1968. "An Analysis of Reimbursement Plans". Reimbursement Incentives for Hospital and Medical Care: Objectives and Alternatives. USDHEW, SSA Office of Research and Statistics, Research Report No. 26, Washington D.C.

Griffith, John R., Walton Hancock, and Fred Munson. November/December 1973. "Practical Ways to Contain Hospital Costs". Harvard Business Review.

Helfert, Erich A. 1967. Techniques of Financial Analysis. Homewood, Illinois: Richard D. Irwin, Inc.

Johnson, Robert W. 1971. Financial Management. Boston: Allyn and Bacon, Inc.

Lave, Judith R., Lester B. Lave, and Lester P. Silverman. March/April 1973. "A Proposal for Incentive Reimbursement for Hospitals". Medical Care. Vol. XI, No. 2.

Lewin and Associates, Inc. September 16, 1974. Nationwide Survey of State Health Regulations. Contract No. HEW-OS-73-212.

Arthur D. Little, Inc. December 1973. The Prospective Reimbursement Program of Blue Cross of Northeast Pennsylvania. Under subcontract with the Harvard Center for Community Health and Medical Care.

Schulz, Rockwell I., and Jerry Rose. June 1973. "Can Hospitals be Expected to Control Costs?" Inquiry. Vol. X, No. 2: 3-8.

Silvers, John Byron, and C. K. Prahalad. 1974. Financial Management of Health Institutions. New York: Spectrum Publications, Inc.

Social Security Administration. August 1974. "Prospective Reimbursement Studies, Experiments, and Demonstrations". USDHEW, Report to the Congress of the United States.

Somers, Anne R., (ed.) 1971. Kaiser Permanente Medical Care Program: A Symposium. New York: The Commonwealth Fund.

Weston, J. Fred, and Eugene F. Brigham. 1974. Managerial Finance. Third Edition, New York: Holt, Rinehart, and Winston.

Wood, Jack C., J.D., (ed.) 1974. Financial Management: An Overview. Topics in Health Care Financing, An Aspen System Corporation publication.

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